INITIATIVE FOR CLIMATE ACTION TRANSPARENCY PROJECT

PHASE II

Inception Workshop Report

FIJI

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Introduction

The United Nations Office for Project Services (UNOPS) and the Initiative for Climate Action Transparency (ICAT) has provided support to the Government of Fiji through the Ministry of Environment and Climate Change in the enhancement of the national Measurment, Reporting, and Verification (MRV) systems to meet national obligations under the Enhanced Transparency Framework (ETF) and Paris Agreement. Fiji was the first country in the world to ratify the Paris Agreement and also led the United Nations' ongoing climate negotiations as President of COP23 while rallying the global community to seek the full implementation of the Paris Agreement to spare the planet from the worst effects of a changing climate.

The ICAT project's first phase '**Set up Sectoral MRV Systems for the Agriculture'** was conducted from January 2021 and May 2022.

The Phase **I** project focused on the MRV System for GHG inventory in the agriculture sector and conducted GHG impact assessment for agricultural policies.

The Fiji ICAT Phase II project started in 2023 . The implementation of the project began with an inception workshop. The key objectives of the inception workshop were to introduce the project to and engage with the key stakeholders in Fiji, establishing mutual understanding and a cooperative action platform for project success; and ensure that project needs, key project tasks, and the project plan are well understood and agreed upon by the key stakeholders.

The key objectives of the project are to

i. Train Extensions Officers to apply the activity data collection procedures in the agriculture sector and to address the gaps in activity data collection identified in Phase I of the ICAT project by:
   a. Designing, developing, and piloting a survey for livestock data collection for the Extension Officers based on the Intergovernmental Panel on Climate Change (IPCC) data requirements for estimating emissions in the greenhouse gas (GHG) inventories, and
   b. Performing targeted capacity-building seminars for the data collection officers on data collection templates.

ii. Design an overarching institutional arrangements and recommendation for national reporting system and design for Fijian national GHG inventory for the use of refrigerants in refrigeration and air-conditioning hydrofluorocarbon (HFC) emissions - biggest source category of the IPPU sector and ozone depleting substances through:

   a. Identifying the national sources for HFC emissions data and mapping the national data flow, and
   b. Training national Fiji experts in estimating HFC emissions for the GHG inventory for the highest emitting category (refrigeration and air conditioning).

iii. Enhance mitigation efforts of Fiji in relation to municipal and industrial waste treatment and utilization through:

a. mapping the activity data flows in the solid waste disposal on land category, and
b. estimating the GHG impact of the currently running and identified new biogas projects in alignment with the waste sector data in the national GHG inventory.

The objectives and tasks that will be completed as part of this project are outlined below. There were three speakers in this workshop: Mr.Oleg Bulanyi spoke first, discussing ICAT Phase I and providing a quick overview of what ICAT Phase II will deliver. Speaker 2, Dr. Olia Glade from Greenhouse Gas Management Institute (GHGMI), Director for GHG MRV Systems, presented on GHGs, inventory, data, the MRV framework, GHG Inventory under the Paris Agreement, and the enhanced transparency framework (ETF). Ms. Deepitika Chan, Senior Climate Change Officer of Climate Change Division (CCD) of Ministry of Environentt and Climate Change, the third speaker, presented the project overview for ICAT Phase II , which would focus on enhancing the GHG Inventory management system and data institutionalisation for NDC tracking and policymaking.

The workshop was held virtually and attended by fifty people, representing a range of backgrounds including policymakers, academia, researchers, and stakeholders. Annexes 1 and 2 contain the agenda for the inception workshop and a detailed participant roster, respectively. Annex 3 contains photos of workshop participants.

Opening Session

At the beginning of the workshop, **Deepitika Chand**, in her remarks, provided national context for climate action and the ICAT project. Despite being a relatively insignificant emitter of GHGs, Fiji has emerged as a leader in climate action and climate initiatives. Notably, the most recent bold move was to adopt national legislation, the Climate Change Act to set up the full processes of monitoring, reporting, and verification to help meet Fiji's climate reporting obligations, as well as a advance national climate actions and priorities. Fiji, as a Small Island Developing State (SIDS), has some reporting flexibilities under the ETF, yet Fiji is working to address identified gaps in its transparency efforts.

During the ICAT project's Phase I , Fiji focused on establishing institutional arrangements for the agriculture sector, as well as developing a national inventory system manual for inventorying GHG emissions from agriculture using Tier 1 methods..

While working on this Phase II Project, the focus will also be on two additional sectors: Waste and Industrial Irocesses and Products Use (IPPU), the majority of which is comprised of HFC emissions from refrigerators and air conditioners. The work on the IPPU sector is particularly relevant because Fiji is a signatory of the Kigali Amendment and the Montreal Protocol, requiring reporting on emissions related to refrigerant use. While Fiji works to strengthen the reporting processes under the ETF, these efforts also support Fiji's national needs and priorities as follows:

1. Estimating GHG emissions, is crucial for identifying patterns and industries that might be targeted for mitigation efforts.

2. By transparently reporting Fiji's emissions and the impact of implemented measures, Fiji may increase donor confidence in country's work.
3. Lastly, enhancing the ability of local stakeholders to build capacity so that stakeholders are aware of ongoing efforts nationaly and internationaly, and are positioned well to collaborate.

All of the notable attendees were cordially welcomed by **Deepitika Chand**, who also expressed gratitude for their time and effort in attending this crucial meeting. The workshop presentations described below provided stakeholders with a detailed view of the importance and scope of Fiji's activities under the ICAT Phase II project.

Speaker 1: Oleg Bulanyi, ICAT, Senior Programme Manager

Oleg Bulanyi thanked all the participants for attending the Inception meeting. He emphasised the importance of ICAT and provided a brief overview of how ICAT supports countries in their climate transparency initiatives. ICAT was founded in 2015 by funders who wanted to help governments strengthen their transparency efforts under the Paris Agreement. Since 2015, the programme has offered countries with specialised support as well as a number of practical guidelines, tools, and approaches for developing strong transparency frameworks. These frameworks are crucial for policy development, policy implementation, and assessing and reporting on policy impact.

ICAT Phase I project resulted in a disentangled MRV Framework for Agriculture, Livestock, and Rice Crops. It enabled the Fijian government to measure emissions from sectors that were previously impossible to measure, allowing the government to not only report under the UNFCCC and the Paris Agreement, but also to formulate policies that would address not only food security, which is critical for Fiji, but also emissions and efforts to adapt the agriculture sector to the impact of Climate Change.

Oleg Bulanyi explained transparency and its importance. He stated that the ETF is the foundation for executing the Paris Agreement and Nationally Determined Contributions. Transparency is the data required to monitor progress, as well as to establish climate policy, measure success, and make modifications when necessary.

Starting in 2024, countries will submit the biennial transparency reports. These will be based on the MRV framework, which are developed and improved by efforts such as ICAT, Capacity Builidng Initiatve for Transparency (CBIT), and others. Transparency is equally important in formulating national policies in various sectors and implementing them more efficiently and coherently to find synergies between climate change mitigation, adaptation, national development goals, and food security.

Oleg Bulanyi emphasised that waste, as the third sector, will bring multiple benefits to Fiji. It can create opportunities to seek climate funds, decrease GHG emissions and support the national Biogas strategy, which is available. The Government of Fiji can request the impact to address climate funds for financial options. And that impact can only be attained by presenting trustworthy facts resulting

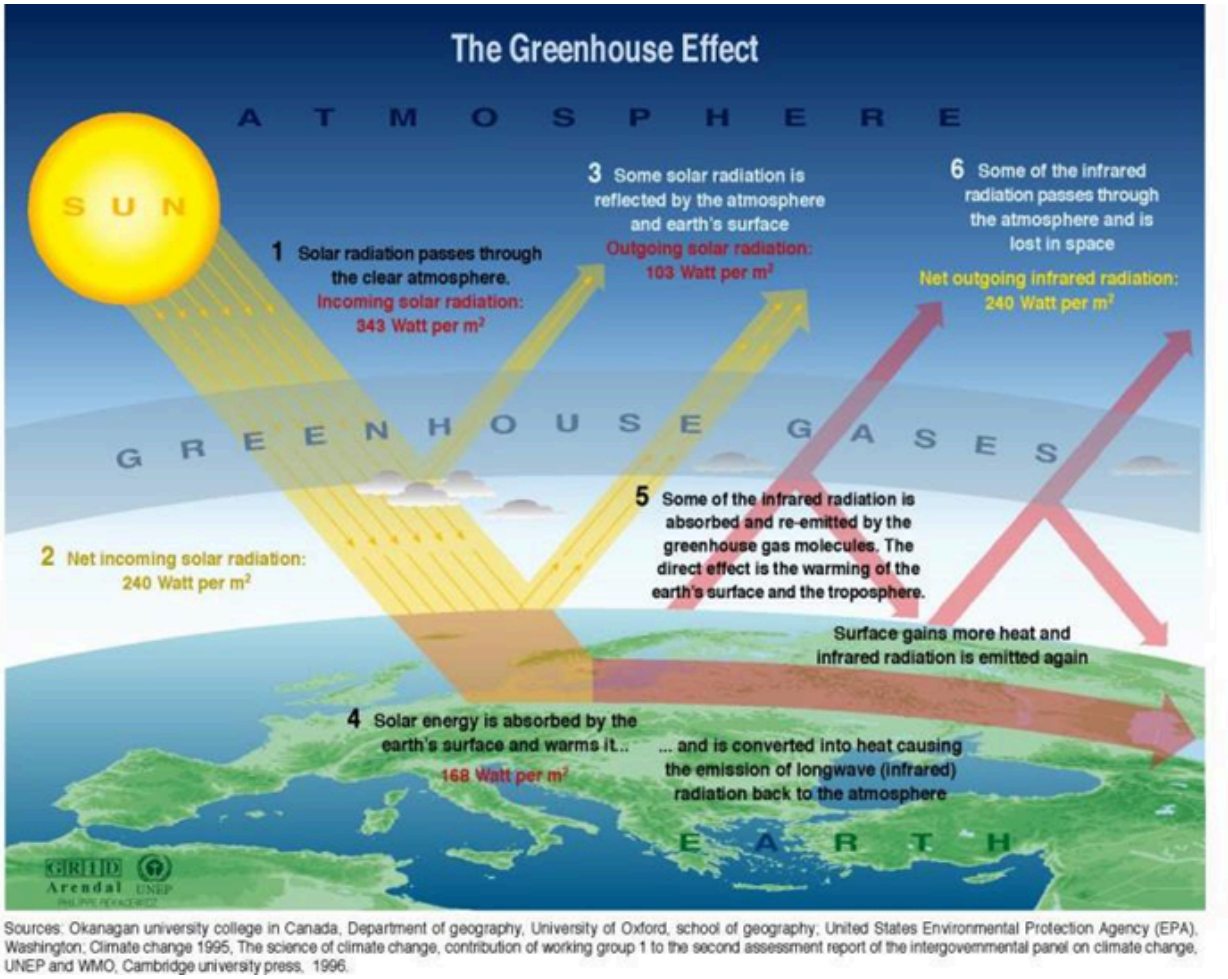
from the project's outputs and results. This initiative supports Fiji's responsibilities as a signatory to the Paris Agreement and the Montreal Protocol and is a benefit to the sectors involved in the effort.

Speaker 2: Dr. Olia Glade, GHGMI, Director for GHG MRV Systems

Dr. Olia Glade of GHGMI, provided an overview of Fiji's GHG emission trends and to better understand the MRV needs of the country. As a project lead for the project Phase I, she underscored the value of continued collaboration and to dive deeper into activity data collection in the agriculture sector, explore new sectors for the project that are important to Fiji. **Dr. Glade's** presentation covered the following:

- Greenhouse gas effect and GHGs
- GHG inventory and GHG data
- Fiji's GHG Inventory at a glance
- Fiji in the global MRV framework
- GHG Inventory under the Paris Agreement and the enhanced transparency framework (ETF)

A conceptual diagram (**Figure 1**) was used explain the GHG effect



Sources: Okanagan university college in Canada, Department of geography, University of Oxford, school of geography, United States Environmental Protection Agency (EPA), Washington, Climate change 1995, The science of climate change, contribution of working group 1 to the second assessment report of the intergovernmental panel on climate change, UNEP and WMO, Cambridge university press, 1996.

***Figure 1**: Conceptual diagram of the GHG Effect*

The three main GHGs are carbon dioxide (CO_2), and methane (CH_4) followed by nitrous oxide (N_2O) (**Table 1**). Other industrial GHGs include HFCs – the main component of refrigerants which are liquefied gases used in freezers, fridges, and air conditioners. Perfluorocarbon (PFCs), Sulphur hexafluoride (SF_6), and Nitrogen trifluoride (NF_3) are the other GHG gases involved, but the project will focus mainly on HFCs. Chlorofluorocarbon (CFCs), another type of compounds used in refrigerants, have already been phased out.

***Table 1**: Major Sources of GHG, the major contributors are in red*

Sources	Contribution (%)	Gases produced
Electricity and Heat	25	CO_2, CH_4,N_2O
Agriculture and Land	20	CH_4,N_2O, CO_2
Industry	18	CO_2, N_2O, F-gases, CH_4
Transportation	14	CO_2, CH_4,N_2O
Other Energy	10	CO_2, CH_4,N_2O
Food Waste	7	CH_4, CO_2, N_2O

Building	6	CO_2

A national GHG inventory is a complete account of emissions and removals of anthropogenic GHG resulting from economic activities within a national territory over a given period of time (annual estimates). It includes a set of data tables and a report describing:

- How emissions are estimated
- What the results are
- Interpretation of the results
- Emissions trends over time
- Explanations and commentary

The GHG inventory informs mitigation strategies and establishment of emission reduction targets. It also helps to develop climate change scenarios, build emission projects, and envision what the future patterns might be like.

In **Table 2** the inventory structure is given. The source indicates that the gases emitted enter the atmosphere, whereas the sink is where part of the emissions can be absorbed from the atmosphere. The table shows which categories are covered.

***Table 2**: Inventory structure: economic sectors covered in estimations*

Category	Description	Gases	Source/sink
Energy	Combustion and fugitive emissions from the production, storage, and use of fuels	CO_2, CH_4, N_2O	Source
Industrial Processes and Product Use (IPPU)	GHG emissions from chemical reactions during industrial processes or product use	CO_2, CH_4, N_2O and F-gases	Source
Waste	GHG emissions associated with waste management, disposal, and decomposition	CO_2, CH_4, N_2O	Source
Agriculture	Emissions from livestock and management of agricultural soils	CO_2, CH_4, N_2O	Source
Land Use , Land-Use Change and Forestry (LULUCF)	GHG emissions from land use, land use change, and forestry	CO_2, CH_4, N_2O	Source or Sink

GHG inventory reporting and Fiji within the global climate framework

The first step is to measure, observe, and collect data, followed by institutional arrangements, a strong Quality Assurance/Quality Control system (QA/QC), and verification, which will verify the quality and accuracy of our results, and a data management system, because inventory is all about data, and

we need efficient and effective systems processes and tools to digest these massive amounts of data and produce meaningful results. Fiji's reporting requirements are National Communications and Biennial Update Report. Both these reports include inventory chapter. From the year 2025, the above report will be replaced by a Biennial Transparency Report which has a more substantial inventory presentation including more in-depth cross sectoral analysis gas coverage, inventory category coverage.

Fiji has so far published three National Communications (NC) reports (NC1, NC2 and NC3), the most recent being in April 2020. Fiji is currently in the process of preparing its first Biennial Update report planned for publication in 2024. Fiji in collaboration with Gauss international produced the new inventory report covering the years 1994 – 2019 and, for the very first time, extending the coverage of emitted GHGs to include emissions of fluorinated gases.

Under the existing UNFCCC system there was a split between the developed and developing countries, where the key difference was the annual GHG inventory submitted by developed countries every year. Biennial reports in National Communications for developing countries contain the National GHG inventory component. Under the ETF, developed and developing countries will both submit the Biennial Transparency Report (BTR) every 2 years. The first BTR submission deadline is by the end of 2024, though developing countries will have flexibilities in their submission process. The primary benefit of this is that developed and developing countries will have regular expert review of this document, allowing developing countries to improve processes related to GHG inventories and other aspects of MRV, as well as assist developing countries in tailoring and targeting their climate change efforts much more efficiently and effectively.

GHG Inventories under the ETF: Key elements of the reporting

The flexibility noted in red relates to flexibility provisions in modalities, processes, and guidelines (MPGs) for developing country parties who require it based on their capacity. That is why capacity building is employed in Fiji to produce a complete inventory encompassing all categories and gases that are significant in Fiji.

Cross - cutting

- Mandatory key category analysis (KCA) is new to Fiji. From the start of the reporting process to the finish, we must conduct inventories of emissions (flexibility).
- The inventory year T-2 (flexibility).
- Time series from 1990 to inventory year, flexibility for island countries (flexibility).
- Quantitative and qualitative uncertainty analysis which is important to trace the quality of data (flexibility).
- Completeness – significance threshold which is applied to other categories which will help us to focus on effort of the most emitting categories (flexibility).
- Quality assurance and quality control is important to trace the quality and reliability of data (flexibility).

Metrics and Methods

- Use the Assessment report 5 (AR5) global warming potentials
- Use the 2006 IPCC Guidelines, Wetlands Supplement use is encouraged.

Sectors and Gases

- Energy, IPPU, Agriculture, LULUCF and Waste are reported separately using the guidelines and the tools that is provided by the IPCC
- The gases that are covered are CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3.
- Indirect CO_2 emissions which is encouraged
- Party to indicate if natural disturbances are included in the totals
- If use IPCC method other than production approach for harvested wood products (HWP), report also production approach.

Inventory data collection and management

In order to produce an inventory, activity data (AD), such as the amount of fuel consumed for transportation, house heating, fertiliser use, and livestock numbers is collected. To calculate emissions, we need to use emission factors (EF), which represent emission rates associated with unit of activity. The EF are derived from technical measures, scientific investigation, exploration, and observation. GHG emissions are calculated by multiplying the AD and EFs

In addition, there is also accompanying data for the inventory, which have different scientific and non-scientific characteristics. There is also metadata. Metadata includes information about who collected it and when, how often was the data collected,what recording procedures were employed for the collections, etc.

Once emissions are estimated, data can be further utilized. One of the most common uses of the data is for policy scenarios. There are various development scenarios in which GHG statistics on emissions are critical.

We also require socio-economic statistics, which are typically utilised to enable Climate Change scenarios and projections. They are used as proxy data to fill in data gaps, and we can also see if our emissions are increasing at the same rate as population and GDP growth, or if there is a recoupling (restoration of economic variables or asset returns to their historical relationships following a period of divergence), which is beneficial.

GHG data collection steps

1. Identify the **key data sources** (Who produces the data? Which gases are emitted? Which activity data is required to calculate emissions etc.?)
2. Decide which parameters will be collected during the **data collection** process. (Which is obtained data on human activity which may lead to GHG emissions?)
3. Conduct a **data quality assessment**. The quality assessment of the data is conducted at the source if the data is measured or collected from the surveys etc.

4. Calculate Uncertainty either based on the National data or used from default values.
5. Compile EF and additional parameters needed for calculations as described in the IPCC guidelines and/or the country specific models. Calculation tier depends on data availability.
6. Calculate emissions and interpret data to understand emission trends, produce inventory reports and use inventory data for projections and also for plans, policies and government decisions on specific mitigation actions.

Fiji GHG inventory at a glance (1994 - 2019) – by sector

Figure 2 shows the distribution and timeseries of Fiji GHG emissions. Sixty-seven % of emissions in 2019 were attributed to the energy industry, 17% to agriculture, 12% to waste, and 4% to IPPU. The LULUCF sector is excluded from this data since it functions as a sink.

GHG emission trends in Fiji changed significantly since the first inventory in 1994. The inventory includes the following categories: Energy, IPPU, Agriculture, LULUCF, and Waste. The emissions in the IPPU, Waste, and Agriculture sectors are driven by the country's general economic activity, as measured by the GDP. Fiji has a significant renewable energy infrastructure, accounting for more than 67% of total country energy production in 2019. In addition to the relatively high use of fossil fuels in industry and construction, transportation is the largest emitter in the energy sector.

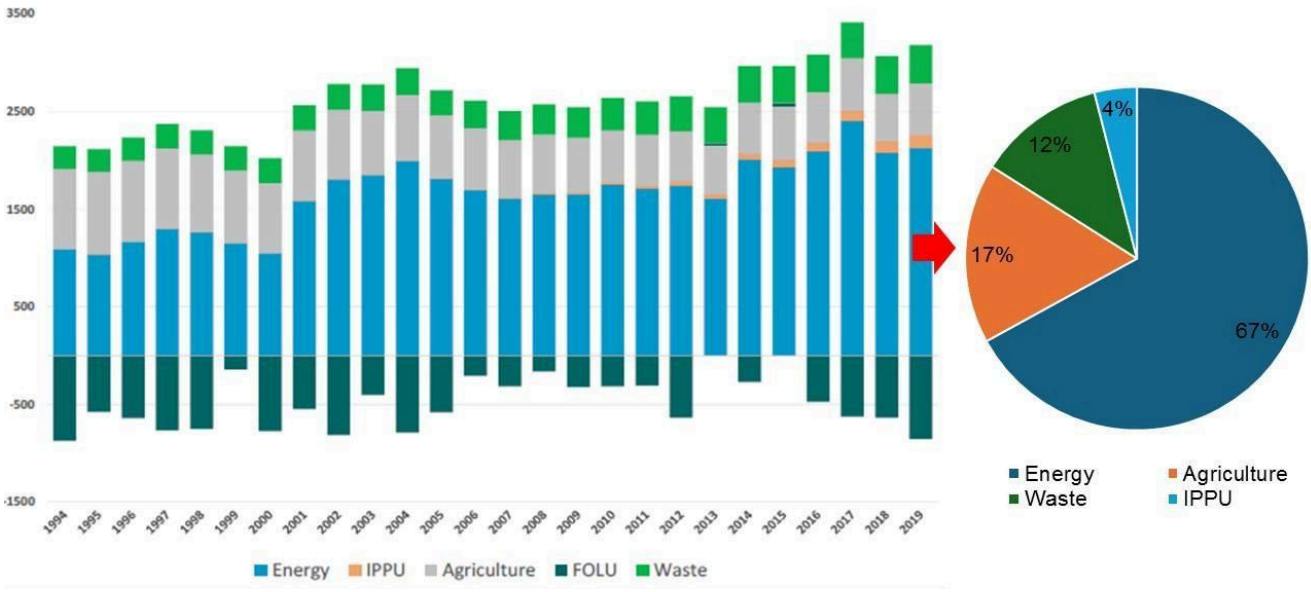


***Figure 2**: Fiji GHG inventory at a glance from 1994 – 2019 by sector as follows: Energy, IPPU, Agriculture, FOLU and Waste. The pie chart is the inventory for only 2019.*

It should come as no surprise that in 2019 the transportation sector generated about 43% of the GDP of the country. Despite being an island nation, the primary source of Fiji's transportation emissions is road travel, accounting for over 75% of all energy emissions. This is 2.5 times more than emissions

from international aviation and 5 times more than emissions from international navigation. Domestic navigation contributes 3% and domestic civil aviation 1% of the total energy emissions.

It is still early in the process of Fijian reporting from the IPPU category. The IPPU sector is already included in the National Inventory Report (NIR) 2023. It is the sector where emissions from use of refridgrants such as HFCs and perfluorocarbons, are estimated and reported. Although it contributes the least to overall GHG emissions in terms of quantity, these gases have the global warming potential (GWP) thousands of times greater than that of CO_2.

When compared to the IPPU sector emissions from 2015to 2019, the IPPU GHG emissions increased by 62%. It is critical to enhance Fiji's MRV capabilities for this category of emissions.

Investigating the major data section, communicating with data holders regularly, carefully studying the inventory methodology, and being proficient with useful templates and tools are all necessary to obtain accurate estimates. The producing sector that makes up a sizable portion of Fiji's national economy is agriculture. Additionally, it generates about FJD 200 million in export revenue each year. In 2019, the combined emissions from cattle and agriculture accounted for almost 17% of all emissions worldwide (excluding forestry and other uses of the land). From 2013 to 2019, the sector's overall emissions were rather stable in Fiji. It is the main source of CH_4 and NO_2 emissions in Fiji. To estimate these emissions with more accuracy, enhanced AD collection is needed and this will be one of the key activities in this project.

Since the turn of the twenty-first century, Fiji's waste sector has experienced a significant shift that is ongoing as it works to achieve its long-term sustainable and low-carbon development goals. Along with all other sources of NO_2 and CO_2, waste is a growing source of CH_4 emissions, particularly due to the rising volume of wastewater. Fiji is working hard to reduce the emissions from the waste sector, which will be the third component of this project project.

Fiji GHG inventory at a glance (1994-2019) by gas

The main gas emited is CO_2 followed by CH_4, NO_2 and HFC (growing fast). In 2019, 67% of the emission came from CO_2, 23% from CH_4, 6% from NO_2 and 4% from F-gases. CO_2 increased its contribution in the initial years in 1994. It became the predominant gas in 2001 contributing 67% of the national total emissions later in 2019.

The primary source of CO_2 emissions is the energy industry. Forests absorb a significant quantity of CO_2. According to calculations made in 2019, forests sequestered 40% of the CO_2 that was produced by all other industries. In 2019, methane emissions represented 23% of the nation's overall emissions. Livestock, enteric fermentation, and the land-based disposal of solid waste in the waste industry account for the majority of CH_4 emissions. Between 1994 and 2019, nitrous oxide's share of the emissions decreased from 20% to 6%. Direct and indirect emissions from agricultural soils from application of of both organic and inorganic fertilisers on productive fields, are the main contributors. F-gases make up 4% of all emissions in the country and are growing quickly. It is larger than the

majority of developed nations. In Fiji, mobile and stationary air conditioning and refrigeration are the main sources.

Speaker 3: Deepitika Chand, CCD, Senior Climate Change Officer

Ms. Deepitika Chand provided the project overview of ICAT Phase II, which will focus on expanding the GHG Inventory management system and data institutionalization for NDC tracking and policymaking.

Project Objectives

- To achieve and strengthen the climate MRV framework in Fiji by applying the methodologies and good practices learned from Agriculture sector (under ICAT Phase 1 project) and applying them to the Waste sector and IPPU sector by including the fluorinated gases.
- To prioritise the aspects of Fiji's climate policy and national obligations under the UNFCCC, Paris Agreement, and the Kigali Amendment to the Montreal Protocol.
- Do capacity building with the stakeholders and to achieve our national goals and objectives which is to further strengthen the climate MRV framework in Fiji by extending the methodology and good practices developed in Phase 1 to increase coverage of sectors and gases and provide a strong linkage of the GHG inventory data with the prioritized aspects of Fiji's climate policy and national obligations under the UNFCCC, the Paris Agreement, and the Kigali Amendment to the Montreal Protocol.

Focus sectors

- Agriculture, IPPU and Waste.

1. Agriculture

The work stream will focus on enhancing data collection by the extension officers through the agriculture survey. The work stream will include:

a. Development and piloting of a survey for livestock data collection for the Extension Officers based on the IPCC data requirements for estimating emissions in the GHG inventories.
b. Targeted capacity building training on the data collection templates are provided to the data collection officers (Extension Officers) in Fiji.

Specific Objectives

Train Extension Officers to apply the AD collection procedures in the agriculture sector and to address the gaps in AD collection identified in Phase I of the ICAT project by:

- Designing, developing, and piloting, a survey for livestock data collection for the Extension Officers based on the IPCC data requirements for estimating emissions in the GHG inventories, and

- Performing targeted capacity building seminars for the data collection officers (Extension Officers) on data collection templates (preparatory session, 2 webinar seminars and in-person workshops).

Outcomes

- Fiji has the enhanced capacity to manage and or implement an effective national MRV/transparency system in the Agriculture sector to measure the performance of the targeted policies and actions under the Enhanced Transparency Framework of the Paris Agreement;
- Fiji successfully applies good practices and tools that integrate transparency on climate policies and action with evidence based policymaking in the Agriculture sector, assessing the impacts (in terms of GHG emissions, and socio-economic and sustainable development) of policies and measures; and
- The capacity building activities in the agriculture sector enable the government Extension Officers to provide robust and reliable AD for calculating livestock emissions from the agriculture sector.

2. IPPU

Refrigeration and air conditioning equipment are widely used in Fiji (nearly every house have at least 1 refrigerator). Hydrofluorocarbon is the largest emitter in Fiji from the Fluorinated (F) gases. Challengers are faced while reporting of F-gases in GHG inventory (Department of Energy, Fiji Revenue and Customs Services and Department of Environment are involved in this inventory. There is need to identify the National Sources for HFC emissions data,map the relevant national data flows, and Provide IPCC- based technical training for the National Fiji experts in estimating HFC emissions for the GHG inventory for the highest emitting category (refrigeration and air conditioning).

Specific Objective

Design an overarching institutional arrangements and recommendation for national reporting system and design for Fijian national GHG inventory for the use of refrigerants in refrigeration and air-conditioning (HFC emissions):

- Identifying the national sources for HFC emissions data and mapping the national data flow.
- Training national Fiji experts in estimating HFC emissions for the GHG inventory for the highest emitting category (refrigeration and air conditioning).

Outcomes

- Fiji addresses the national GHG emissions form the use of refrigerants and refrigeration and air conditioning by identifying national sources for HFC emission data, mapping the national data flows, and applying tier 1 IPCC methodology to calculating GHG emissions from the available data sources.
- Fiji has verified calculation of the baseline for HFCs under the Kigali Amendment using the available National data.

3. Waste

Solid waste disposal is the biggest source category of the waste sector according to the latest GHG National inventory, mainly contributing to CH_4 emissions. Intention to increase its mitigation efforts in the waste sector using the latest technology available to capture biogas in landfill facilities (solid waste management) and industrial facilities and use it for energy purposes under the Renewable Energy Programme. Solid waste is a huge challenge in Fiji since it is hard to determine the emissions. There is potential for biogas to produce energy, and communities have been doing this, for example, by recycling the organics to produce biogas used in cooking.

Specific Objectives

Enhance mitigation efforts of Fiji in relation to municipal and industrial waste treatment and the utilisation through:

- Mapping the AD flows in the solid waste disposal on land category (require assistance from municipal council for solid waste disposal; and
- Estimating the GHG impact of the currently running and identified new biogas projects in consistency with the waste sector data in the national GHG inventory.

Outcomes

- Fiji's capacity to address the activity data sourcing for solid waste disposal will improve through targeted training and mapping the relevant data flows.
- Fiji's Policymakers will be made aware of the GHG mitigation potential for solid waste disposal due to current and planned implementation of the biogas projects in the country.

Key Stakeholders

The success and growth of an organisation are heavily influenced by its primary stakeholders. The following list includes some of the ICAT project's stakeholders.

Academia – The Unversity of the South Pacific (USP), Fiji National University (FNU) and University of Fiji

All the sectors - Climate Change Division (CCD), The Fiji Bureau of Statistics (FBOS).

Agriculture

CCD, FBOS, Ministry of Agriculture, Crop Research Unit, Animal Health and Production, Extension services, Pacific Islands Framers Organization Network and Fiji Crop and Livestock Council.

IPPU (fluorinated gas)

CCD, FBOS, Department of Environment and Fiji Revenue and Custom Services.

Waste

Town Councils Private Sector, Department of Environment, CCD and FBOS.

Project Timeline

Project was approved in December due to administrative processes. The Project is expected to take 12 month to complete as shown in **Table 3**.

***Table 3**: Gantt Chart with the Project timeline*

Annex B: Project Timeline			**Responsible Party** *(identify who will lead and support the work)*			**2024**											
Activity	**Output**	**Description**	Lead	Support entity #1	Support entity #2	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**June**	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
0		Inception phase	PMO/MECC	GHGMI													
	A	**Inception meeting**	MECC	Technical experts	GHGMI												
1		National system and data institutionalization for the biggest ODS substitutes source category (Refrigeration and air conditioning)	MECC	Technical experts	GHGMI					government approval time							
	B	**The National guidance for estimating HFC emissions from the consumption of substitutes of Ozone depleting substances and their blends in refrigeration and air conditioning category**	MECC	Technical experts	GHGMI												
	C	**Training and delivery support provided – workshop report**	MECC	Technical experts	GHGMI												
2		Enhancing Agriculture MRV system: Addressing activity data issues in the agriculture sector and institutionalization of the livestock data	Project coordinator & Technical experts	GHGMI	MECC							government approval time					
	D	**Data collection template in MS Excel**	GHGMI	PC & Technical experts	MECC												
	E	**Livestock survey draft**	GHGMI	PC & Technical experts	MECC												
	F	**Instruction manual for livestock survey**	PC & Technical experts	GHGMI													
	G	**Training and delivery support provided to technical experts – workshop report**	Project coordinator & Technical experts	GHGMI	MECC												
3		Enhancing mitigation efforts of Fiji in relation to municipal and industrial waste treatment and utilization	GHGMI	Technical experts	MECC											government approval time	
	H	**Training and delivery support provided – workshop report**	PC & Technical experts	GHGMI	MECC												
	I	**A report on the GHG mitigation potential of the biogas projects for Fiji.**	PC & Technical experts	GHGMI	MECC												
4		Project wrap up	GHGMI	PC & Technical experts	MECC												
	J	**Final project report**	GHGMI	PC & Technical	MECC												
	K	**Outreach materials**	PC & Technical experts	GHGMI	MECC												

Discussion

Professor Santiago Mahimairaja from Sugar Research Institute of Fiji (SRIF) suggested to include SRIF in the ICAT project. Since Sugar sector is one of the major sector or component in Fiji. With regards to GHG emission, the industry uses the sulphate of ammonia which is predominant nitrogen fertilizer (acidic). It contributes to emission of large amounts of NO_2.

Ms. Deepitika Chand informed that SRIF will be also included as one of the stakeholders. Other projects such as the capacity building initiative project will look at setting up the institutional arrangements and data collection processes for the Agriculture sector. The project team will look at how the sugar industry fits into this process.

Department of Environment asked how the emission % for HFC was reported as 4%. They also requested clarification about the technical training provided to the stakeholders.

Ms. Deepitika Chand responded that the data was collected from Fiji Revenue and Customs Service (key source of data) and also some data was collected from Department of Energy. The uncertainty level is high thus we need improved data collection and reduce uncertainty in emission estimates. The training on the 20th and 21st of February, will focus on inventory calculation methods for HFCs. Department of Environment and FRCS will be included in the training as well. The training will cover the data, different institutional arrangements and templates.

Department of Environment asked the main objective of the technical training?

Ms. Deepitika Chand responded that there will be mapping of the various data flow of fluorinated gases and also work on trying to use Tier 1 methodologies to calculate emissions from HFC. HFC is an increasing gas emission in Fiji so we need to really look at it. The AD needs to be improved to get more accurate estimates of emissions .

Department of Environment advised collecting HFC data from them because they report to the Ozone Secretariat and the data is confirmed by the FRCS, the companies that import refrigerants, and the suppliers of those refrigerants. All of the collected data is from the **Department** of Environment, so it is preferable to utilise our data because it has been compiled.

Dr. Francis Mani of USP previously served as the GHG inventory consultant and faced numerous challenges, particularly about HFC emissions. It's not about import and export data; instead, we need to look at the appliances that contain HFC and use the leak rate to determine the emissions. Dr. Mani also mentioned the data training that is required to have robust GHG inventory estimations for HFCs in the IPPU sector.

Dr. Deepa Pullanikkatil, Commonwealth National Climate Finance Advisor to Fiji at CCD, Ministry of Environment and Climate Change, asked a data-driven question. In 2015, the LULUCF sector had absolutely nothing, but by 2019, it had about 1000. What was the cause of such an increase? Was there a natural disaster that caused the destruction of mangroves or trees, or was there a historical event that occurred?

Ms. Deepitika Chand stated that whatever sources, emissions were deducted, and sinks were shown. Deforestation processes were eliminated, and only the sink was considered.

Next step for the ICAT Phase 2 project

- Work with Australian Centre for International Agricultural Research (ACIAR) and Ministry of Agriculture by designing, developing, and piloting a survey for livestock data collection for the Extension Officers based on the IPCC data requirements for estimating emissions in the GHG inventories. Academics Dr. Mani and staff from Fiji National University (FNU) are moving from Tier 1 to Tier 2 calculations for Livestock in the Agriculture sector.
- Collaborating with New Agriculture Research Institute to look at the data gaps for livestock that can be filled to utilize Tier 2 calculations.
- There is a capacity building Initiative for Transparency project that looks at the overarching institutional arrangement, data collection template, MOUs between different institutions as well as an online data management. Here are a few instances of the national project. In the future, all of these little initiatives will fit into a larger scheme.
- ICAT project Phase II will have 4 experts (Fluorinated gases, waste and agriculture) and the Project Coordinator
- F-gases workshop to be held form the 20th -21st of February
- Other workshops and training will be organised by the ICAT Project coordinator.

Conclusion

Ms. Deepitika Chand concluded the programme by thanking everyone for their participation and contributions. She also thanked participants for their continuous support and guidance on the ICAT initiative, which aims to strengthen the country and society's resistance to rising GHG emissions.

Annex 1 : Workshop Agenda

Table 4: Agenda for the Inception Meeting

Inception Meeting Agenda		
8.30 -8.35	Welcome Remarks and Introduction	Ms. Deepitika Chand, Senior Climate Change Officer, Climate Change Division (CCD)
8.35 – 8.40	ICAT Remarks	ICAT Representative
8.40 – 8.50	Remarks From GHGMI Technical Support Team	Dr. Olia Glade, GHGMI Director for MRV systems at GHGMI, and ICAT/ Fiji Project Manager
8.50 – 9.35	ICAT Project Overview	Ms. Deepitika Chand and Dr, Olia Glade.
9.35 – 10.20	Question and Answers	All
10.20 – 10.30	Next Steps and Closing	Ms. Deepitika Chand
10.30	Photo	All

Annex 2: Workshop participants

Table 5: *Participant List*

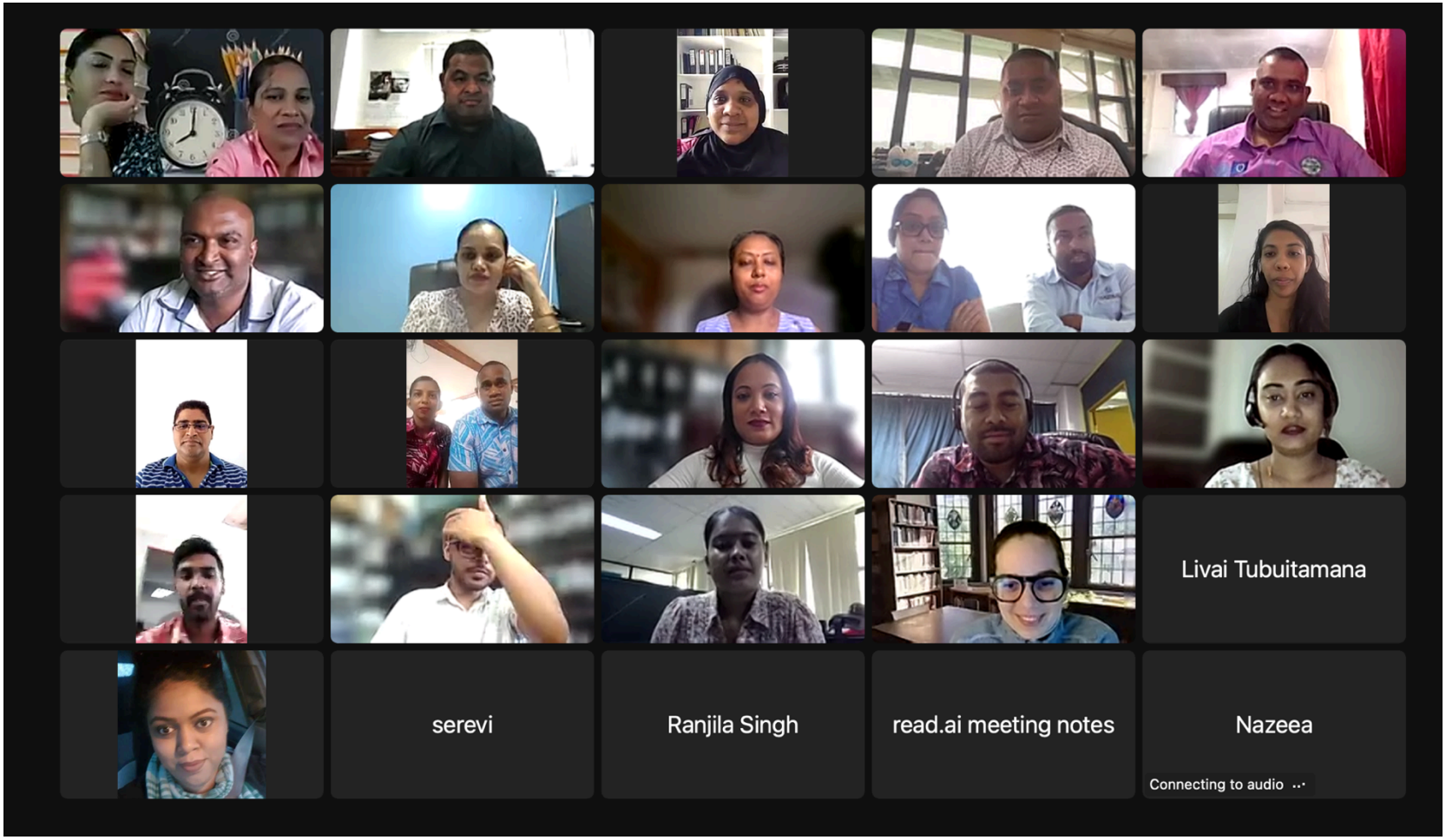
	Name	**Department**	**Role**
1	Jashika Lal	Ministry of Forestry	
2	Gwynneth Chan	Savusavu Town Council	
3	Serevi Nabura	Rakiraki Town Council	
4	Nirvi Lal	Rakiraki Town Council	
5	Santiago Mahimairaja	Sugar Research Institute Fiji	CEO
6	Muni Reddy	Nadi Town Council	CEO
7	Francis Mani	USP	Senior Lecturer

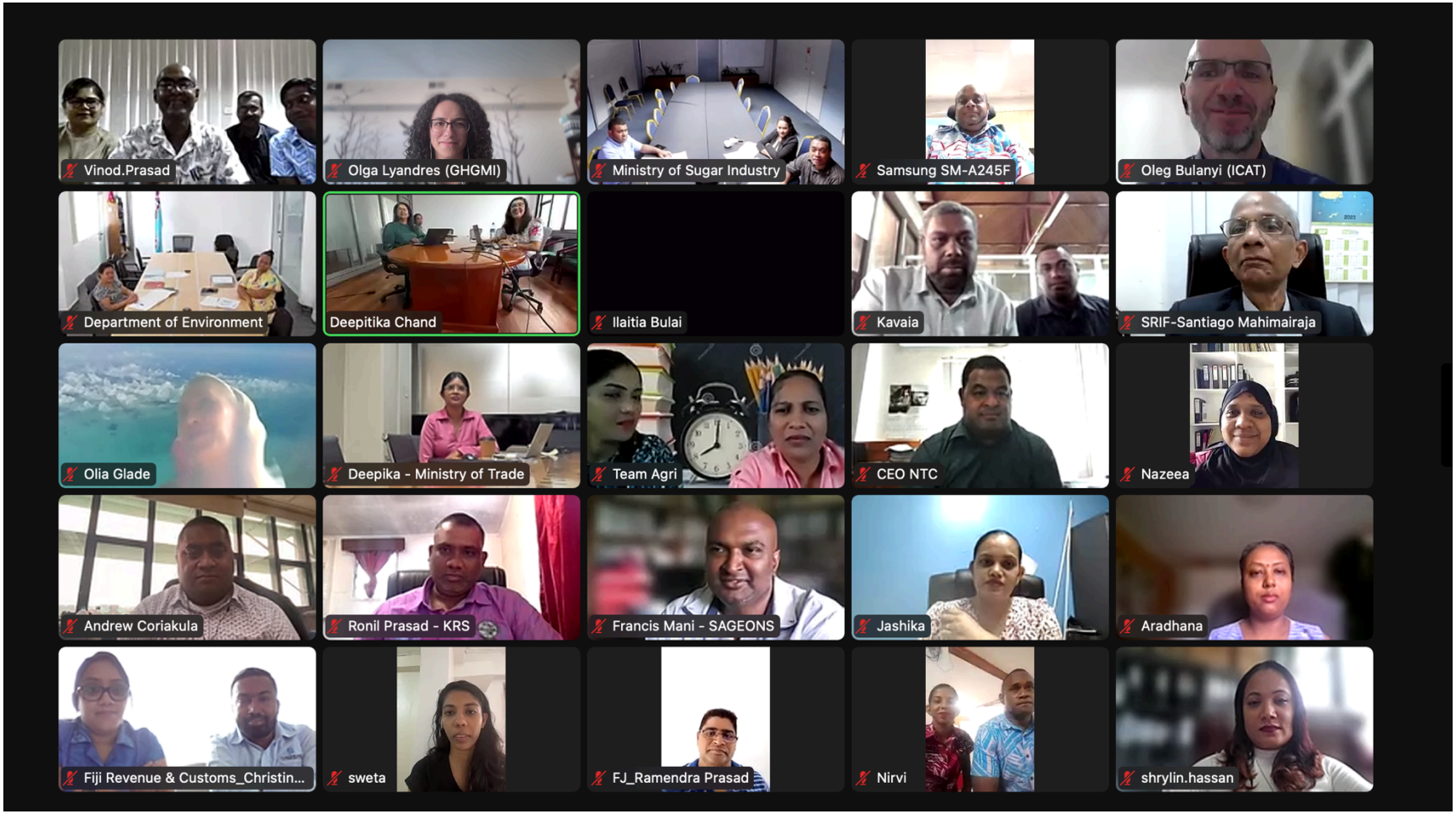
8	Renu Dayal	Ministry of Sugar	Economic Planning Officer
9	Rusi Veikoso	Ministry of Sugar	Executive Officer Grants
10	Irami Lewaravu	Ministry of Sugar	Principal Economic Planning Officer, Commissioner Westerns Office
11	Jiu Daunivalu	Fiji Crop & Livestock Council	CEO
12	Adish Naidu	Sigatoka Town Council	Special Administrator Chair
13	Umesh Chand	Sigatoka Town Council	Special Administrator
14	Muni Anand Samy Pillay	Sigatoka Town Council	Acting Chief Executive Officer
15	Loveleen Chetty	Ministry of Civil Service	
16	Aradhana Singh		Consultant
17	Eleni Nayacaibuna	Department of Environment	Senior Environment Officer
18	Iva Josivini	Department of Environment	Senior Environment Officer
19	Deepika Singh	Department of Trade	Principal Trade Economist
20	Sonam Prasad	Ministry of Employment, Productivity and Industrial Relations	
21	Sweta Kuamr	GGGI	Officer
22	Namisha Nikita	CBIT Project	Consultant
23	Andrew Coraikula	Strategic Planning Office, Minisry of Finance	SDG Specialist
24	Cristine Saxena	FRCS	Economic Planning Officer

25	Ilaitia N. Bulai	Ministry of Lands and Minerals	Technical Assistant - Project, Mineral Resources Department
26	Madhu Chand	Ministry of Finance	Economic Policy Planning Officer
27	Vinod Prasad	Fiji Sugar Cooporation	Technical Services Manager
28	Nazeea Bano	Sugar Research Institute Fiji	Technical Officer
29	Zahra Nizbat		PhD Candidate
30	Irene Rozika	Ministry of Agriculture	
31	Sera	Ministry of Agriculture	
32	Ronil Prasad	Ministry of Agriculture	
33	Kavinesh Kumar	Ministry of Agriculture	Research Officer
34	Oleg Bulanyi	ICAT	Senior Programme Manager
35	Avinesh Swammy	FRCS	Intelligence Analyst
36	Ramendra Prasad	Uni Fiji	Senior Lecturer
37	Sherylin Hassan	CCD	Programme Development Manager
38	Krishan Pratap	CCD	Project Coordinator, Drua Incubator and Parternerships Project
39	Livai Tubuitamana	iTaukei Affairs Board	Senior Administrative Officer - Conservation, Itaukei Affairs Board
40	Viliame Delailakeba	Ministry of Fisheries	Assistant Programmer, Fisheries
41	Deepitika Chand	CCD	Senior Climate Change Officer
42	Ranjila Singh	CCD	Mitigation Specialist
43	Olia Glade	GHGMI	

44	Olga Lyandres	GHGMI	
45	Alissa Benchimol	GHGMI	
46	Sandeep Kumar	Fiji Sugar Coproration	
47	Saleshni Chaudhry	Fiji Sugar Coproration	
48	Rajnesh Narayan	Fiji Sugar Coproration	
49	Lusiana Biumaiwai	Ministry of Health	Senior Health Inspector
50	Deepa Pullanikkatil	CCD	Commonwealth National Climate Finance Advisor

Annex 3: Workshop photos


Livai Tubuitamana
serevi
Ranjila Singh
read.ai meeting notes
Nazeea
Connecting to audio


Vinod.Prasad
Olga Lyandres (GHGMI)
Ministry of Sugar Industry
Samsung SM-A245F
Oleg Bulanyi (ICAT)
Department of Environment
Deepitika Chand
Ilaitia Bulai
Kavaia
SRIF-Santiago Mahimairaja
Olia Glade
Deepika - Ministry of Trade
Team Agri
CEO NTC
Nazeea
Andrew Coriakula
Ronil Prasad - KRS
Francis Mani - SAGEONS
Jashika
Aradhana
Fiji Revenue & Customs_Christin...
sweta
FJ_Ramendra Prasad
Nirvi
shrylin.hassan