UNFPA 2017 GREENHOUSE GAS (GHG) INVENTORY MANAGEMENT PLAN

This document is produced thanks to the collective input of UNFPA personnel, especially of green focal points for GHG reporting. Document's authors: Yunjing Li and Qiao Li, UNFPA Environmental Sustainability Team.

Contents

1 Introduction

This Greenhouse Gas Emissions Inventory Management Plan (IMP) provides a detailed foundation for the UNFPA comprehensive effort to measure and manage greenhouse gas emissions from its internal global operations. This document provides organization-wide information, including corporate overview and goals, boundary conditions of the inventory, emissions quantification methods, data management methods, base year, list of management tools, and verification processes.

The IMP sets forth the current vision of UNFPA's commitment to inventory and manage greenhouse gas (GHG) emissions for its internal global operations and contains the UNFPA's greenhouse gas inventory methodology.

The UN GHG Inventory follows a common minimum boundary and GHG accounting principles mostly prescribed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development's (WBCSD) Greenhouse Gas Protocol Initiative (GHG Protocol), but at the same time allows participating UN entities flexibility within these limits.

2 IMP 2017

2.1 Version information

Item	Description	
A	Reporting Period	2017
B	Version Number of IMP	v1
C	Corresponding inventory version number	v1
D	Date IMP Completed	Friday, August 10th, 2018

2.2 Contact information

Item	Description	
1	Inventory Contact:	Oliver Buehler
2	Inventory Contact Information:	buhler@unfpa.org

2.3 Boundary conditions

2.3.1 Organizational Boundary:

UN entities differ in their structures and operations. According to the guidelines of the GHG Protocol for corporate GHG Inventory reporting, a company's organizational boundaries can either be defined by the amount of equity a company has in an operation (**Equity Approach**) or based on a company's operational control over a location or facility (**Control Approach**). The GHG Protocol also requires that a company select the type of organizational boundary according to which method most accurately reflects the day-to-day practices of the business.

Control can be defined in either financial or operational terms.

- *Financial Control*: An entity has financial control over the operation if the former has the ability to direct the financial and operating policies of the latter with a view to gaining economic benefits from its activities.
- *Operational Control*: An entity has operational control over an operation if the former or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation.

The UNFPA applies the principle of operational control to define the boundaries of its GHG inventory.

Consistent with this approach the UNFPA accounts for GHG emissions from its locations for which it has direct control over operations, and where it can influence decisions that impact GHG emissions. This includes all owned and leased facilities/vehicles operated by UNFPA.UNFPA adheres to the UN wide boundary for emission reporting.

2.3.2 List of GHG's Being Accounted for under the UN GHG Inventory:

See UN-wide IMP

2.3.3 List of Organization-Wide Facilities Included in this Inventory:

The list of facilities falling within the reporting boundary has been obtained from UNFPAs Country Office Real Estate Management System (COREM) as well as the UNFPA's Global Directory of personnel. Focal points provide the number of personnel. The number of personnel reported is the number taken from HR records at the moment of reporting. The UNFPA acknowledges other factors that may lead to significant fluctuation in personnel number, such as an office open or close.

Office Info					
Name	**Dept Type**	**Region**	**Office Size**	**Office Space(m2)**	**Number of Staff**
Afghanistan	CO	ASIA	Very Large	2344.00	76
Albania	CO	EECA	Small	163.57	7
Algeria	CO	ARAB STATES	Small	188.00	8
Angola	CO	ESAR	Medium	439.13	18
Arab States Regional Office	RO	ARAB STATES	Large	1300.00	40
Argentina	CO	LAC	Very Small	60.00	2
Armenia	CO	EECA	Small	114.86	8
Asia and Pacific Regional Office	RO	ASIA	Large	956.87	45
Azerbaijan	CO	EECA	Small	144.00	8
Bangladesh	CO	ASIA	Large	620.00	49
Barbados	CO	LAC	Very Small	18.58	2
Belarus	CO	EECA	Small	213.55	14
Benin	CO	WCA	Medium	400.00	30
Bhutan	CO	ASIA	Very Small	62.90	4
Bolivia	CO	LAC	Medium	716.00	28
Bosnia & Herzegovina	CO	EECA	Small	136.00	11
Botswana	CO	ESAR	Small	205.36	14
Brazil	CO	LAC	Medium	319.93	19
Burkina Faso	CO	WCA	Medium	931.00	31
Burundi	CO	ESAR	Medium	637.00	31

Cambodia	CO	ASIA	Medium	560.00	21
Cameroon	CO	WCA	Large	1243.52	45
Cape Verde	CO	WCA	Small	2245.00	13
Central African Republic	CO	WCA	Medium	50.00	35
Chad	CO	WCA	Medium	1000.00	33
Chile	CO	LAC	Very Small	12.00	1
China	CO	ASIA	Medium	704.00	25
Colombia	CO	LAC	Medium	415.98	27
Comoros	CO	ESAR	Small	280.90	10
Congo	CO	WCA	Medium	1204.00	23
Copenhagen-Nordic	HQL	DCS	Very Large	2179.00	79
Costa Rica	CO	LAC	Very Small	128.00	4
Cote D'Ivoire	CO	WCA	Large	1200.00	42
Cuba	CO	LAC	Small	89.05	8
Dem Rep Congo	CO	ESAR	Very Large	3600.00	79
Dem Rep Korea	CO	ASIA	Small	489.79	8
Djibouti	CO	ARAB STATES	Small	395.40	8
Dominican Republic	CO	LAC	Small	162.67	13
Ecuador	CO	LAC	Small	313.00	14
EECA Regional Office	RO	EECA	Medium	1270.00	33
Egypt	CO	ARAB STATES	Medium	650.00	27
El Salvador	CO	LAC	Medium	400.00	17
Equatorial Guinea	CO	WCA	Small	480.00	14

Eritrea	CO	ESAR	Small	262.00	10
Ethiopia	CO	ESAR	Large	235.00	68
Executive Office	HQ	UNFPA	Very Large	8342.81	414
Gabon	CO	WCA	Small	204.75	8
Gambia	CO	WCA	Small	220.16	10
Georgia	CO	EECA	Small	117.00	13
Ghana	CO	WCA	Medium	705.00	24
Guatemala	CO	LAC	Medium	534.32	31
Guinea	CO	WCA	Large	708.00	47
Guinea-Bissau	CO	WCA	Medium	298.10	16
Guyana	CO	LAC	Very Small	36.23	2
Haiti	CO	LAC	Medium	710.00	35
Honduras	CO	LAC	Medium	384.85	27
India	CO	ASIA	Large	1124.30	44
Indonesia	CO	ASIA	Large	409.00	40
Iran	CO	ASIA	Medium	314.00	16
Iraq	CO	ARAB STATES	Large	410.00	54
Jamaica-SRO	SRO	LAC	Small	449.81	10
Jordan	CO	ARAB STATES	Medium	700.00	37
Kazakhstan	CO	EECA	Small	140.80	9
Kazakhstan-SRO	SRO	EECA	Very Small	88.40	3
Kenya	CO	ESAR	Medium	366.98	34
Kosovo	CO	EECA	Small	93.00	6

Kyrgyzstan	CO	EECA	Medium	228.00	16
Lao	CO	ASIA	Medium	300.00	23
Latin America/Caribbean Regional Office	RO	LAC	Medium	1208.00	35
Lebanon	CO	ARAB STATES	Medium	228.50	16
Lesotho	CO	ESAR	Small	267.00	13
Liberia	CO	WCA	Medium	2076.50	32
Libya	CO	ARAB STATES	Medium	298.00	16
Macedonia	CO	EECA	Very Small	71.00	5
Madagascar	CO	ESAR	Medium	705.54	35
Malawi	CO	ESAR	Medium	805.00	37
Malaysia	CO	ASIA	Very Small	147.16	4
Maldives	CO	ASIA	Very Small	127.93	4
Mali	CO	WCA	Medium	1200.00	37
Mauritania	CO	WCA	Medium	536.00	28
Mexico	CO	LAC	Medium	448.61	23
Moldova Republic	CO	EECA	Small	114.00	13
Mongolia	CO	ASIA	Medium	335.36	21
Morocco	CO	ARAB STATES	Small	315.00	8
Mozambique	CO	ESAR	Medium	402.00	36
Myanmar	CO	ASIA	Large	519.11	59
Namibia	CO	ESAR	Small	318.00	13

Nepal	CO	ASIA	Very Large	2241.00	80
Nicaragua	CO	LAC	Small	205.70	14
Niger	CO	WCA	Medium	301.00	37
Nigeria	CO	WCA	Very Large	361.28	108
Office in Brussels	HQL	DCS	Small	288.00	6
Office in Geneva	HQL	DGM	Small	405.15	13
Office in London	HQL	DCS	Very Small	12.00	1
Office in Tokyo	HQL	DCS	Small	67.00	10
Office in Washington	HQL	DCS	Very Small	92.65	2
Oman	CO	ARAB STATES	Small	329.48	11
Pacific-SRO	SRO	ASIA	Medium	8810.20	21
Pakistan	CO	ASIA	Large	773.37	48
Palestine	CO	ARAB STATES	Medium	620.00	22
Panama	CO	LAC	Very Small	167.27	5
Papua New Guinea	CO	ASIA	Medium	216.00	17
Paraguay	CO	LAC	Small	278.00	10
Peru	CO	LAC	Medium	1391.97	20
Philippines	CO	ASIA	Large	853.45	52
Regional Office/ESA Region	RO	ESAR	Large	1767.10	56
Regional Office/WCA Region	RO	WCA	Large	777.35	43
Republic of Yemen	CO	ARAB STATES	Large	1352.00	41
Rwanda	CO	ESAR	Medium	685.00	27

Sao Tome & Principe	CO	WCA	Small	168.00	6
Senegal	CO	WCA	Medium	112.00	24
Serbia	CO	EECA	Very Small	109.00	5
Sierra Leone	CO	WCA	Large	2356.00	41
Somalia	CO	ARAB STATES	Medium	25.59	33
South Africa	CO	ESAR	Medium	366.00	18
South Sudan	CO	ESAR	Very Large	13297.00	105
Sri Lanka	CO	ASIA	Medium	285.72	26
Sudan	CO	ARAB STATES	Very Large	850.00	73
Suriname	CO	LAC	Very Small	34.00	2
Swaziland	CO	ESAR	Small	373.00	14
Syrian Arab Republic	CO	ARAB STATES	Large	440.00	65
Tajikistan	CO	EECA	Small	247.00	15
Tanzania	CO	ESAR	Medium	660.00	28
Thailand	CO	ASIA	Small	337.50	10
Timor Leste	CO	ASIA	Medium	311.00	25
Togo	CO	WCA	Medium	120.00	26
Trinidad	CO	LAC	Very Small	57.41	3
Tunisia	CO	ARAB STATES	Small	250.00	12
Turkey	CO	EECA	Medium	467.00	38
Turkmenistan	CO	EECA	Small	204.30	8

Uganda	CO	ESAR	Large	1500.00	63
Ukraine	CO	EECA	Medium	355.00	25
Uruguay	CO	LAC	Small	139.00	7
Uzbekistan	CO	EECA	Medium	411.52	23
Venezuela	CO	LAC	Small	437.00	10
Viet Nam	CO	ASIA	Medium	185.52	25
Zambia	CO	ESAR	Medium	402.11	35
Zimbabwe	CO	ESAR	Large	1008.00	48

2.3.4 List of Offices Not Included in This Inventory:

The UNFPA includes all the main offices in its reporting boundary, including the small offices with fewer than 5 personnel. UNFPA however, does not include secondary or project offices irrespective of their size.

2.3.5 Emission Source Categories (Direct, Indirect and Optional Sources of GHG Emissions):

Direct Emissions:

On-site (stationary) combustion – scope 1
Refrigerants – scope 1
Mobile sources - scope 1

Indirect Emissions:

Electricity purchases – scope 2
Purchased heat, steam, and chilled water – scope 2

Other Indirect Emissions:

Business travel emissions – scope 3

2.3.6 UNFPA Boundary Condition Assumptions:

The inventory data collection methodology is, to the extent possible, the same throughout all offices.

Our boundary conditions and assumptions are outlined below:

Buildings

- Where UNFPA shares office facilities without a separate meter, emissions are apportioned by percentage of total square meters occupied by the organization.
- Estimates on number of personnel are derived from HR records at the moment of the reporting.
- All offices are required to report on electricity, refrigerants, steam, and generator fuel consumption (when applicable).

Electricity

For offices that are able to provide electricity consumption for the entire building but not for the UNFPA-occupied area, annual electricity consumption is prorated for the UNFPA-occupied area. This is accomplished by dividing the UNFPA-occupied space by the size of the entire building and then multiplying this figure by the annual electricity consumption of the facility.

Where reliable electricity figures are missing: a proxy is calculated using the SUN recommended methodology - based on office square meters and Energy Efficiency Index (EEI) per climatic zones.

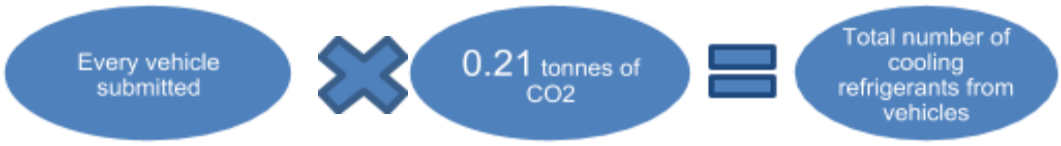
Each country office was able to report the specific source of electricity (including options such as solar, grid and generator) through the GHG calculator. This enabled UNFPA to account for savings in electricity through investments in photovoltaic.
For 2017 UNFPA for the first time included electricity for common areas at the HQ building, which increased emissions for electricity at HQ by 340 tonnes of CO2e

Cooling

Refrigerant data is often one of the hardest pieces of information for offices to collect.
All UNFPA offices are asked to submit annual refrigerant use if applicable. The consumed amount is not reflected in the total amount of refrigerant used in the equipment, but only the amount that is used to "top up" or replace the refrigerant (similar to the oil that is used in a car). That is how we are able to calculate

refrigeration, freezer, and air-conditioning equipment leak refrigerants. GHGs from heating, ventilation, or air conditioning (HVAC) operations, refrigeration, and freezer units are not intentionally released, but escape into the atmosphere as fugitive emissions through varying means, including but not limited to maintenance, installation, disposal, and operational leakage.

Though refrigerants utilized in vehicles for air conditioning are a minute part of the UNFPA's GHG emissions from internal business operations, GHG Emission calculator automatically counts for cooling refrigerants from vehicles per every vehicle submitted.



Generators

Formation on purchased steam or heat from an individual Combined Heat and Power plant (CHP) can be acquired by consulting the office's purchasing records (amount of steam/heat purchased) and/or by contacting office building management. If the office purchased fuel for generators that are owned by UNFPA, the office is asked to enter information within the "Generators" category instead. Where steam figures or generator fuel figures are missing a data gap is marked.

Air travel

Air travel is representative of the UNFPA's core business activities and a significant emissions source. All offices are required to fill in Air Travel data under Travel category in GHG Emission Calculator. Air travel information is based on the ICAO air travel calculator which is measured in tonnes of CO2 and total km traveled.

The green focal points obtain information on air travel either by contacting their travel agency or by collecting data from the associate responsible for travel at their office. Then, they transfer the data to ICAO air travel calculator spreadsheet. UNFPA HQ asks all the offices to submit their ICAO air calculator spreadsheet report for the reference.

Where IATA codes are faulty and/or incomplete, they are corrected by UNFPA HQ on the base of likelihood/approximations or further clarification from the focal points.

- Entitlement travel is not included in 2017 GHG Emission report and marked as data gap.
- Relocation travel is impossible to determine and marked as data gap.
- All other types of ET (Initial Appointment, Lump-Sum Travel) are marked as a data gap.

In 2017 UNFPA realized for the first time a number of duplications for HQ Travel data. By eliminating the duplicate data a reduction in emissions of about 250 tonnes CO2e compared to the previous year was created.

Public transportation

Public transportation is a problematic category for local focal points to report on due to lack of regular record-keeping of this type of travel. This emission category will be targeted for data quality improvement.

To account for transportation to/from airports, the GHG Helpdesk recommends applying a proxy of 25km per terminal recorded under "taxi" (also in those locations where taxi services are not used). Having said that in most UNFPA locations transport to/from airports is provided by an office vehicle and therefore already accounted for in the vehicle emissions.

Other emissions from public transport such as rail travel is included in the submitted Air travel data.

Mobile sources

Mobile GHG emissions result from the combustion of fuel in an organization's owned and leased vehicles. In accordance with the operational control approach for organizational boundaries, the UNFPA reports data for fleet vehicles that it owns and operates (data on vehicles operated by implementing partners is not included).

The majority of UNFPA offices report the quantity of fuel used from driver logs or invoices. Many vehicles have fuel consumption logs to track their purchases.

All the mobile sources data is entered either by fuel used or by distance traveled.

GHG Emission Calculator asks the offices to specify vehicle type and fuel type.

Not all offices report mobile fuel use. Some do not have any owned or leased vehicles.

Optional reporting: Water consumption

Water consumption was optional exercise for the offices to report in 2017, though we encourage offices to do so through accessing water bills and/or meters. The UNFPA is striving to make water consumption a mandatory exercise starting next year, as this data will be integral to the UN's broader sustainability reporting in the coming years.

Optional reporting: Waste management

Like in previous years, local focal points were also asked to report on waste management as part of the 2017 GHG inventory, however on a voluntary basis. Nevertheless, providing the data was highly encouraged given that the data will be integral to the UN's broader sustainability reporting in the coming years. However, due to the voluntary nature of the reporting and the limited data turnover, the collected data cannot be considered reliable for 2017. Reported data have been recorded on a UNFPA internal spreadsheet but will not be shared with SUN.

UNFPA has continued its efforts to measure e-waste production. E-waste includes items like monitors, laptops, desktops, and mobile phones. Country offices reported how many items they disposed of in 2017, and then indicated whether the item had been donated, discarded, or recycled. Similar to the rest of waste management collection, e-waste reporting was voluntary and data turnover was limited. Received data however, provides the basis for a global e-waste programme UNFPA is planning in the future.

2.4 Emissions quantification

2.4.1 Quantification method:

See UN-wide IMP
Note on quantification of Scope 3 emissions - duty travel emissions (air travel):
Business air travel is a significant component of UNFPA emission profile. In the UN GHG inventory, emissions from air travel are calculated using the ICAO air travel calculator (v 5.0).

Proxies for total countries' emissions were used for the following countries: Argentina, Cape Verde, Chile, Dem Rep Korea, Office in Washington

Electricity proxies were used for the following countries: Equatorial Guinea, Ethiopia, Gabon, Guinea-Bissau, South Africa, East and South Africa Regional Office

Heating proxies were used for the following countries: Afghanistan, Albania, Belarus, Jordan, Kazakhstan, Kazakhstan-SRO, Office in Brussels, Serbia, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan

Travel proxies following UN protocol were used for: Equatorial Guinea, Guinea-Bissau, Somalia

2.5 Data Management

2.5.1 The UNFPA Data Collection:

The UNFPA continued to centralize GHG emissions data collection and management in 2017 by using a Web-based inventory management application called GHG Emission Calculator available through the UNFPA Intranet https://www.myunfpa.org/Apps/EmissionCalc/app//index.cfm

It allows users to input activity data via a simple online questionnaire that collects information in following categories:

- General – number of month at this property in 2017, office space occupied by UNFPA, total number of staff physically located in UNFPA facilities.
- Vehicle – by fuel used, or by distance travelled.
- Generators
- Electricity use- specifying the energy source (grid, solar or generator)
- Heating
- Cooling
- Travel – rail and bus travel, and Air Travel
- Water
- Additional – waste, recycling

Data owners in country offices are typically green focal point staff or designated administrative staff who collect the necessary information. A notification is sent to green focal points in the second quarter of each year alerting them that annual GHG Emissions Calculator application is ready for entries. The system is secure and requires data providers (GHG Emission calculator Users) to have the right to work with the GHG Emission Calculator.

2.5.2 Source of Activity Data:

Vehicle Sources

- Fuel consumption/mileage for office car: activity data typically comes from fuel purchase receipts and/or log book records. Where fuel purchase data is not available, typically driver log information on fuel purchases or mileage is used.

Generators

- Generators on-site that are UNFPA owned. This information is usually collected from purchasing records maintained by facility managers of buildings and/or contacting building management or the vendor directly.

Electricity

- Emissions from electricity usage typically come from landlords for leased buildings and from monthly electric utility bills for owned buildings.

Steam

- Purchased steam or heat from an individual Combined Heat and Power plant (CHP) can be acquired by consulting the purchasing records (amount of steam/heat purchased) and/or contacting the building management.

Travel

- Air Travel data is collected the following way. First, Field Office Focal Point obtains annual travel data through their local travel management contractor. Then, the itinerary with expressed IATA codes and class of travel is transferred for processing into the ICAO calculator. Afterwards, the final number is entered to GHG emission calculator under Air Travel category. A copy of each country's travel ICAO report is saved for internal records and verification purposes.
- Land-based travel including bus and train is calculated by distance travelled and the latest UN emission factors.

2.5.3 Normalization Factors:

See UN-wide IMP

2.5.4 Data Collection Process for Normalization Factor:

Office square meters and number of personnel are self-reported by individual offices via the UNFPA GHG calculator application.

2.5.5 Data Collection Process – Quality Assurance:

Uncertainty is widespread in all data sources, as office reports are not accompanied by any supporting evidence but rely fully on the accuracy of reporting personnel.

To provide a level of quality assurance with the country office activity data, all office entries are reviewed in detail and clarifying questions are sent to key contacts. When clarifying information is not received, data is taken out of the inventory if it has a large potential for error and will skew inventory results. In these cases an estimate is made when possible.

To detect obvious errors, year on year comparison of the reported emission levels is performed. This type of quality check is possible for offices that are at least in their second year of reporting.

2.5.6 Data Collection System Security:

Data Collection System is administered through the MYUNFPA intranet site. A maximum of two GHG focal points per office are provided access to that office's information. Admin-level access is provided only to UNFPA's GHG focal point at the executive office.

2.5.7 Integrated Tools:

Custom GHG Application is accessed on the MYUNFPA intranet site.

2.5.8 Frequency:

Facility data will be reported on an annual basis in time for annual inventory reporting, generally by the end of the third quarter of the year.

2.6 Base Year

2.6.1 Base Year:

UNFPA performed its first GHG inventory in **2008** as per UN- Wide Inventory Policy.

2.6.2 Base Year Recalculation Policy:

At present, a Base Year Recalculation Policy specific to UNFPA does not exist. UNFPA will follow the UN-wide recalculation policy when this is made available, or until its internal recalculation policy is developed.

2.6.3 Adjustment – Structural Changes:

Structural changes include mergers, acquisitions, and divestments and/or outsourcing or insourcing of GHG emitting activities. Changes in the status of leased assets also are considered structural changes. At this stage UNFPA did not have any structural changes compared to the base year.

2.6.4 Adjustment – Methodology Changes:

Methodology changes include changes in activity data accuracy, changes in emission factors, changes in electricity intensity or air travel intensity figures, and/or changes to the methodology used to calculate GHG emissions.

UNFPA follows the UN wide guidance in this area.

2.7 Management Tools

2.7.1 Roles and Responsibilities:

GHG Focal Points in each of the field offices provided office information into the UNFPA GHG Database. This information is then compiled by a GHG Focal Point at the UNFPA HQ office.

Each UNFPA office is encouraged to have a chart to track roles and responsibilities. This IMP contains detailed roles and responsibilities for UNFPA HQ only.

Emission Source	Location	Department Responsible	Persons responsible
Electricity, Boilers, Refrigeration, Waste	UNFPA HQ Leased space	FASB	Mr. Rogelio Abreu, Administrative & Facilities Management Associate
Mobile Combustion Sources	Owned UNFPA HQ vehicles	Office of Security Coordinator	Mr. Jimmy Lopez,

			Security Assistant
Business Travel	Travel booked through American Express & Ultramar	FASB	Ms. Elsa Kandelman, Chief, Travel Services

2.7.2 Training:

The UNFPA understands that the large majority of local focal points performs different professional functions and is not familiar with issues of climate neutrality or environmental sustainability. It is therefore important that the Emissions calculation tool is as simply as possible. UNFPA's GHG calculator fulfills this prerequisite without compromising quality of data.

2.8. Auditing and Verification

2.8.1 Internal Auditing:

Internal procedures used to verify accuracy of GHG inventory. UNFPA has a data quality review in place for all data submitted by Country Offices, to ensure that results are realistic.

2.8.2 External Validation and/or Verification:

At this stage there is no External procedures (i.e. 3rd party verifiers) used to verify accuracy of GHG inventory.

2.8.3 Management Review:

At present, there is no management review process for the GHG inventory.