

Greenhouse Gases (GHG) Monitoring Report



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What is GHG Monitoring Report?

GHG stands for greenhouse gases. These gases, including Carbon Dioxide (CO2), Methane (CH4), Nitrous Oxide (N2O) and various per fluorides and hexafluoride of carbon, trap the heat received from the sun and raise the temperature of the earth. In the past 10 years, this phenomena is increased multifold thereby raising the overall temperature of the world, resulting in climate change and adverse weather conditions. This has made it important to monitor the GHG emissions of the organization's operational activities.

Such an activity is important in terms of emissions monitoring, reporting, mitigating effects of greenhouse gas emission on the atmosphere as well as such reporting improves the organization reputation as an active member driving towards a sustainable future. This also helps organizations in complying with the latest legal compliances established by governments post the Paris Agreement of 2015.

PQSmitra Team assists organizations in implementing GHG Monitoring reporting requirements, data collection, and report formation in a systematic manner. The methodology includes initial review, planning, implementation, and publishing. PQSmitra Team provide active support and hand-holding for organizations to formulate and publish a comprehensive report.

What are the standards used for GHG Monitoring Report?

- GHG reporting is mainly done using the following standards:
 - 1. Greenhouse Gas Protocol (GHG Protocol)
 - 2. ISO 14064
- Other Standards that can be used for GHG reporting include:
 - American National Standards Institute (ANSI)/American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 169-2012: Standard for Measuring, Monitoring, and Verifying Greenhouse Gases
 - 2. The Climate Registry (TCR) Protocols
 - 3. World Business Council for Sustainable Development (WBCSD) Cement Sustainability Initiative (CSI) Protocol
 - 4. International Aluminum Institute (IAI) Life Cycle Inventory (LCI) Database



What are the benefits of GHG Monitoring Report?

GHG Monitoring Report has various benefits which assist organizations, governments, and society in taking concrete decisions for addressing climate change, improving sustainability, and promoting transparency and accountability.

Some of the benefits of GHG Monitoring Report are:

- Environmental Responsibility
- Climate Mitigation
- Compliance with Regulations
- Risk Management
- Improved Efficiency
- Cost Reduction
- Competitive Advantage
- Investor and Stakeholder Relations
- Innovation and Market Opportunities
- Long-Term Planning
- Global Reputation
- Scientific Understanding

Which Organization are eligible for publishing GHG Monitoring Report?

The eligibility for GHG Monitoring Report varies depending on the standards used. The factors considered for this are:

- Size and Emission Thresholds
- Type of Organization
- Jurisdiction and Geographic Location
- Public vs. Private
- Scope of Emissions
- Sectoral Regulations
- Emission Sources
- Threshold Changes



Which Standards or assessments require GHG Monitoring Report?

Various standards and assessments require organizations to report their greenhouse gas emissions. The specific requirements and reporting standards can vary by industry, jurisdiction, and program. Some of the standards that require GHG Monitoring Report are as follows:

- 1. The Greenhouse Gas Protocol (GHGP)
- 2. ISO 14064
- 3. The Carbon Disclosure Project (CDP)
- 4. EU Emissions Trading System (EU ETS)
- 5. Regional and National Regulations
- 6. The United Nations Framework Convention on Climate Change (UNFCCC)
- 7. Sectoral Initiatives
- 8. Energy and Environmental Management Systems
- 9. Voluntary Initiatives
- 10. Carbon Offsetting and Reduction Programs

How will PQSmitra help you with Hassle Free GHG Monitoring Report?

PQSmitra adopts a result oriented approach for the effective system implementation at the organization. This simple and practical method of system implementation helps organizations to enhance the business performance and sustainability.

The implementation process is described below

- 1. Initial visit and review of the Organization.
- 2. Review of the applicable scopes of emissions
- 3. Consultation on applicable scopes of emissions
- 4. Setting of system for data collection
- 5. Data collection as per the scopes.
- 6. Report generation

How is the data grouped in GHG Monitoring Report?

GHG reporting data is typically grouped into three categories:

• **Scope 1 emissions:** These are direct emissions from sources that are owned or controlled by the organization, such as fuel combustion, industrial processes, and fugitive emissions.

• **Scope 2 emissions:** These are indirect emissions from the generation of purchased electricity, heat, or steam that is consumed by the organization.

• **Scope 3 emissions:** These are all other indirect emissions that occur upstream or downstream of the organization's value chain, such as the extraction and processing of raw materials, the transportation of goods and services, and the disposal of waste.

Scope 3 emissions can be further sub-grouped into 15 categories, as defined by the Greenhouse Gas Protocol:

- Category 1: Purchased goods and services
- Category 2: Capital goods
- Category 3: Fuel- and energy-related activities not included in Scope 1 or Scope 2
- Category 4: Upstream transportation and distribution
- Category 5: Waste generated in operations
- Category 6: Business travel
- Category 7: Employee commuting
- Category 8: Leased assets
- Category 9: Downstream transportation and distribution
- Category 10: Processing of sold products
- Category 11: Use of sold products
- Category 12: End-of-life treatment of sold products
- Category 13: Downstream leased assets
- Category 14: Investments
- Category 15: Franchised operations

Which data scopes are important for GHG Report?

All scopes are important for GHG reporting, as this gives a comprehensive emissions data. However Scope 1 & 2 emissions disclosure is mandatory, while Scope 3 emissions disclosure is voluntary.

Can any of the scopes excluded during GHG Report?

Scope exclusion is applicable if the activities listed under the scope are not applicable. This needs to be mentioned in the report with proper justification.

What activities/actions can a company after GHG report?

Following actions can be taken by a company to manage and reduce their emissions after GHG reporting:

- Set Emission Reduction Targets
- Implement Energy Efficiency Measures
- Transition to Renewable Energy
- Promote Sustainable Transportation
- Reduce Fossil Fuel Usage
- Waste Reduction and Recycling
- Optimize Supply Chain
- Employee Engagement
- Invest in Carbon Offsetting
- Data Monitoring and Management
- Third-Party Verification
- Regulatory Compliance
- Sustainability Reporting
- Public Awareness
- Innovation
- Continuous Improvement
- Benchmarking
- Training and Education

Can GHG emissions be offset, and how does offsetting work?

Yes, GHG emissions can be offset by investing in activities or projects that reduce or remove an equivalent amount of emissions elsewhere. Offset projects can include reforestation, renewable energy development, and methane capture initiatives.

How often should I report GHG emissions?

Reporting frequency varies by jurisdiction and organizational goals. Many organizations report annually, but the frequency can depend on regulations, industry standards, and internal sustainability objectives.

How do I calculate my GHG Emissions?

Emissions are calculated using emission factors specific to each emission source and a standard formula:

- Emissions (CO2e) = Activity Data x Emission Factor.
- Activity data represents the level of activity associated with the emission source (e.g., fuel consumption), and the emission factor reflects the emissions produced per unit of activity (e.g., emissions per gallon of fuel).

Can small businesses benefit from GHG Monitoring Report?

Yes, even small businesses can benefit from GHG reporting by identifying cost-saving opportunities, enhancing their environmental reputation, and staying ahead of potential regulatory requirements.

How does GHG Monitoring Report affect investor decisions?

GHG reporting allows investors to assess a company's environmental performance and risk exposure, influencing investment decisions and shareholder engagement.



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