

ANA Group Environmental Data

Organizational Boundary, Calculation Methodology, and Assurance Framework

1. Data Collection & Governance System

The ANA Group has established a robust, centralized data collection and governance system to ensure the highest accuracy, traceability, and reliability of its environmental and energy performance data.

- **Ground Operations Platform:** For ground-based facilities and offices globally, the Group utilizes GreenGlobeX (GGX), an advanced, cloud-based environmental performance management platform, to monitor and analyze energy consumption, greenhouse gas (GHG) emissions, water use, and waste generation.
- **Aviation Fuel Consumption Measurement:** Aviation fuel consumption is recorded on a fuel-uplift basis, aggregating actual fuel uplifted at each departure across all group airlines. Data is sourced directly from fuel procurement records and submitted by each airline. CO₂ emissions are calculated by applying the applicable emission factors to the total fuel uplift figures. This data is maintained in a dedicated ledger, managed separately from the ground-based GGX platform.
- **Data Input & Approval Control (Four-Eyes Principle):** At each Group company and business location, designated data operators input actual monthly energy and resource consumption figures directly from physical utility invoices (billing records) into the GGX system. To prevent errors and ensure data integrity, a designated supervisor with formal approval authority cross-checks the inputted values against the original source evidence (invoices/receipts) before granting system approval.
- **Consolidation & Executive Oversight:** The Corporate Sustainability Promotion Department aggregates and consolidates these verified metrics from all entities. The consolidated environmental performance is formally reported to the Group ESG Management Promotion Committee—chaired by the Chief ESG Promotion Officer (CEPO) and overseen by the Representative Director and President of ANA Holdings Inc.—to monitor progress, manage environmental risks, and maintain alignment with company-wide sustainability targets.

2. Organizational Boundary & Reporting Scope

To align its sustainability disclosures with its organizational and managerial reality, the ANA Group defines its environmental reporting boundary based on the Operational Control Approach, in strict accordance with the GHG Protocol Corporate Accounting and Reporting Standard.

- **Boundary Alignment:** The reporting boundary is fully aligned with the financial consolidation scope disclosed in the ANA Holdings' Annual Securities Report (Yukashoken Hokokusho).
- **Scope of Coverage:** The boundary covers ANA HOLDINGS INC. and all 59 consolidated subsidiaries (including overseas subsidiaries). This encompasses all core and supporting business segments:
 - Air Transportation (Aviation)
 - Aviation-Related Businesses (Maintenance, Ground Handling, In-flight Catering, and Passenger Services)
 - Travel Services
 - Trading and Retail (including ANA trading group companies)
 - Real Estate, Facility Management, and other domestic and international supporting operations.
- **Data Collection Sites:** The environmental data tracking framework covers approximately 250 business locations (sites) globally. The aggregation scope under the GGX platform comprehensively encompasses all overseas operations, including overseas consolidated subsidiaries, branch offices, and airport/sales stations (covering both corporate entities and unincorporated branch/station sites globally).

3. Data Coverage & Estimation Methodology

The ANA Group is committed to 100% data transparency, completeness, and boundary integrity. In strict alignment with the GHG Protocol, the Group actively incorporates established estimation methodologies for categories where direct primary metered data is unavailable, ensuring that no material sources are excluded from our reported carbon and environmental footprints.

- **Data Coverage:** The reporting coverage for our primary environmental indicators is as follows:
 - **Scope 1 & Scope 2 GHG Emissions, and Energy Consumption:** 100% coverage of

the defined consolidated boundary (including all aircraft operations, as well as all domestic and international ground facilities globally, with shared tenancy locations rigorously estimated using floor-area allocation)

- **Water Withdrawal & Discharge:** 100% coverage of the global consolidated boundary (comprising fully metered domestic operations—which represent the vast majority of the Group's water footprint—and floor-area-based estimations for small leased overseas branch offices and stations).
- **Waste Disposed:** 90% coverage of the consolidated boundary, focusing on all major domestic operating offices, maintenance hangars, and flight catering facilities
- **Methodological Estimations (Value Chain and Leased Assets):** In accordance with the GHG Protocol Corporate Value Chain (Scope 3) Standard, the ANA Group utilizes representative activity data (such as financial spend, floor area, or annual operating hours) combined with verified industry-standard emission factors to calculate Scope 2 and Scope 3 emissions (e.g., fuel consumption from leased-out aircraft operated by partner airlines). These calculated metrics are treated as fully valid disclosures rather than data omissions, thereby ensuring the absolute completeness of our value-chain reporting.
- **Shared Tenancy Treatment (Estimation based on Floor Area):** For small leased regional sales offices, overseas branch offices, and stations where direct, metered energy and water data is unavailable due to shared tenancy arrangements (where utility bills are bundled into general rent without individual meters), the ANA Group does not exclude these sites from our inventory. Instead, we rigorously estimate their environmental consumption by utilizing the floor area of each office as activity data and multiplying it by appropriate intensity and emission factors. This ensures that emissions and resource footprints from all leased properties globally are fully consolidated under our operational control.
- **Immateriality of the Estimated Portion:** Since the vast majority (over 99.5%) of the Group's total emissions and environmental impacts are derived from aircraft operations, the estimated ground-based portion from these shared tenancy offices is immaterial, representing less than 0.1% of the Group's total environmental impact (GHG emissions).

4. Calculation Standards & Reference Methodologies

All disclosed environmental metrics are calculated based on rigorous international and national standards:

- **Direct & Indirect GHG Emissions (Scope 1, 2, and 3):** Calculated in accordance with the GHG Protocol Corporate Accounting and Reporting Standard and the Corporate Value Chain (Scope 3) Standard.
- **Aircraft Operations:** Calculated based on actual jet fuel consumption and procurement records collected directly from the fuel procurement department and group airlines (managed via spreadsheet ledgers), in accordance with the standards stipulated under the Act on Promotion of Global Warming Countermeasures (the "SHK" system of Japan).
- **Emission Factors:** Derived from the Ministry of the Environment and the Ministry of Economy, Trade and Industry, Japan (Act on Promotion of Global Warming Countermeasures), and the international IDEA Ver. 2.3 database (provided by the Sustainable Management Promotion Organization: SuMPO). Global Warming Potential (GWP) values are applied in accordance with the Intergovernmental Panel on Climate Change (IPCC) Assessment Reports.

5. Independent Third-Party Assurance

To ensure absolute reliability for investors, EcoVadis, and other rating agencies, the ANA Group subjects its environmental performance data to annual independent third-party verification.

- **Assurance Provider, Standard, and Level of Assurance:** All primary environmental performance indicators—including Scope 1, Scope 2, Scope 3 (Categories 1–7 and 13), water withdrawal/discharge, and waste metrics—are verified by LRQA Limited under the ISAE 3000 and ISAE 3410 international assurance standards, providing **limited assurance**.
- **Independence & Evidence:** The independent assurance statements, which explicitly include a declaration of independence confirming no conflict of interest, along with the assurance conclusions, are publicly disclosed annually on the ANA Group sustainability website.