



GLEC Adoption to China Market

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The Challenge: China and freight

- **Freight and logistics form the backbone of the global economy and trade.** China plays a central role as the manufacturer of the world, contributing to about 30% of the global economy and about 27% of global GHG emissions.
- **Commercial freight vehicles generate about 50 % of China's transport GHG emissions** that constitute about 10.2 % of China's total GHG emissions. Freight emissions are growing faster than most other sectors.
- **China's Government has set a 'dual carbon policy'**, aiming for peak emissions before 2030 and carbon neutrality by 2060. Transport policies focus on making the freight sector safe, compliant, efficient and sustainable. China is also the global leader in the manufacturing and adoption of zero emission / electric trucks.
- **Multinational companies feel the pressure to tackle climate change** but struggle with tracking and reducing 'scope 3' emissions from their global logistics supply chains. This includes the more than 1,000 multinationals in China.
- **Road freight carriers face challenges too.** Many carrier lack the know-how on emissions and how to reduce them, access to technologies and funding, and the support from customers ('shippers') and policy makers to take action.
- **Market failures are at the heart of the challenge to decarbonize freight.** A key reason is that the freight sector is highly fragmented: more than 90% of Chinese carriers operate less than 5 trucks. A contributing factor is that many companies still prioritize short-term economic returns over longer-term climate and sustainability concerns. Finally, consumers everywhere usually do not know where their food, clothes or cell phones come from, and are therefore less concerned about the impact from freight transport.

Smart Freight Centre China



- **Who we are:**

SFC China was established in 2014 as the Chinese subsidiary of Smart Freight Centre (SFC) focused on reducing greenhouse gas (GHG) emissions of global freight transportation. It is registered as a company in Beijing as a WFOE of SFC Asia Ltd, which is fully owned by Stichting SFC Netherlands.

- **Our Vision:** A zero-emission global and China logistics sector by 2050 or earlier, consistent with 1.5°C pathways.
- **Our Mission:** To accelerate the reduction of logistics emissions in China by fostering collaboration within the Chinese logistics ecosystem and scaling decarbonization solutions.
- **Our Goal:** the China logistics ecosystem, in particular companies as SFC China members and partners, track and reduce their GHG emissions to achieve 1.5°C pathways.

Target audiences and partners

1. Shippers as “buyers” of freight and logistics services

- 1000+ multinational shippers/LSPs in China,
- Chinese shippers



2. Carriers as “suppliers” of freight and logistics services

- Large carriers/ national LSPs in China (3,500 with 50+ trucks, 38,000 with 10-50 trucks, most are members of CFLP and its Star Fleet Program)



3. Service providers to shippers and carriers

- Technology suppliers, OEMs
- Infrastructure and energy providers
- Other service providers

ZEFI MEMBER (up to February 2024)



4. Other stakeholders who have an influence on freight buyers and suppliers

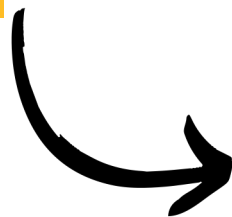
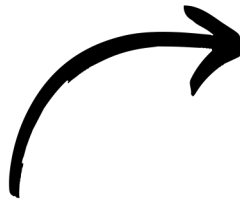
- Government and affiliated agencies
- Industry associations & business networks
- NGOs, research institutes and universities
- Foundations and development agencies



Our Theory of Change & China Programs

If we can

Build communities of shippers, carriers and other freight stakeholders in China



Take a visible leadership role to increase demand for smart freight services and supportive policies



Set the standard for companies to achieve full emissions transparency and track progress



Collaborate to introduce and scale zero emission freight vehicles, other solutions and supportive policies



Establish a pool of preferred carriers who collaborate with shippers to take action and report reduced emissions



Build the capacity of shippers, carriers and service providers to quantify and reduce freight emissions

then we contribute to



ZERO EMISSION FREIGHT and a safe, compliant, efficient, and sustainable freight sector in China

Global Logistics Emissions Council - China

Drivers and Needs



- **Three key drivers exist for companies to report and track logistics emissions**
 - National and international legislation, e.g. EU Corporate Sustainability Reporting Directive and CBAM, China NDRC and MOT
 - Science-Based Targets Initiative reporting against targets and CDP disclosure requirements to inform investors and stakeholders
 - Customers requesting their suppliers to report emissions with independent assurance
- **Needs of companies (freight buyers, LSPs, carriers), service providers and local governments**
 - Development of China-applicable guidelines and emission/default factors to calculate emissions and track progress,
 - Development or accreditation of in-house or external calculation tools that are compatible with the GLEC Framework and ISO14083
 - Capacity building of own staff and suppliers on emissions calculation, reporting, setting targets and identifying solutions
 - Validation / assurance of calculated emissions at the company, corridor/location, project and technology/solution levels

Global Logistics Emissions Council - China

Achievements to date



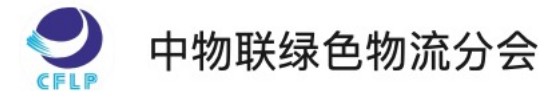
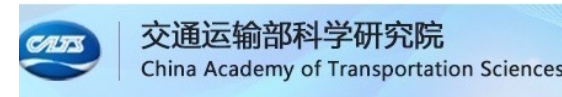
- SFC developed the Global Logistics Emissions Council (GLEC) Framework as the global industry standard, compatible with ISO 14083
- China National Institute for Standardization (CNIS) proposed to develop a National Standard compatible with ISO14083 and GLEC Framework. SFC has been invited to join the National Standard Working Group as a core partner.
- Translated GLEC Chinese version, and developed China emission factors
- Developed 2 industry standards compatible with GLEC
- Established collaboration with key partners as potential China Logistics Emission Council (CLEC).



GLEC 3.0 China Default Values

A Brief Description of Chinese Emission Factors and GHG Emission Intensity Values

April 2024



Global Logistics Emissions Council - China

Next phase



Objective: Set the standard for companies to achieve full emissions transparency and track progress

KPI: Number of companies (shippers, LSPs, carriers) that calculate emissions using the GLEC Framework

Key Results	Activities
2.1 China Logistics Emissions Council is established	<ul style="list-style-type: none"> • Develop terms of reference, governance and work plan 2024-2025 • Identify and invite members from private sector, government, and research/int's NGOs • Host CLEC meetings and activities
2.2 China has a National Standard aligned with the GLEC Framework and ISO14083 and supported by industry	<ul style="list-style-type: none"> • Give own and coordinate industry input to the National Standard drafting • Consult with industry through CLEC (China) and GLEC (global)
2.3 GLEC Framework, supplementary guidelines, and emission/default factors exist for China	<ul style="list-style-type: none"> • Update GLEC Framework China translation based on National Standard • Set up and implement process to expand / update China emission/default factors • Develop a dedicated module/guideline for truck fleet efficiency and zero emission freight vehicles • Determine what supplementary guidelines and needed and develop these
2.4 Companies in China have in-house capacity to calculate, report and track logistics emissions	<ul style="list-style-type: none"> • Develop GLEC Framework and related training courses • Deliver training courses online, in-person, or train-the-trainer • Develop and deliver GLEC advice / help-desk service for companies and service providers, including on the development or accreditation of in-house or external calculation tools
2.5 China National Standard and GLEC Framework are used by companies and stakeholders in China and internationally	<ul style="list-style-type: none"> • Communication (blogs, case studies, presentations, panels, other) and ZEFI Annual Summit • Advocacy for recognition/endorsement by relevant international entities including regulatory (e.g. EU, SEC), investors (e.g. CDP), initiatives (e.g. SBTi), and others

2. Global Logistics Emissions Council - China Partners *(proposed)*



■ Gov't, research, NGO

- China National Institute for Standardization
- CAT / Research Institute of Transport Science (Ministry of Transport)
- World Resources Institute
- VECC/Vehicle Emission Control Center, Ministry of Ecology and Environment
- CDP China
- ICCT China
- UC Davis
- GIZ China

■ Private sector

- China Federation for Logistics Procurement
- SFSA members who adopted GLEC Framework globally: IKEA, Maersk, Shell, and other companies
- US-China and EU-China Chambers of Commerce
- Assurance and consulting companies: SGS, CSI, Smart Trans, LOG Institute

GLEC adoption strategy in China

<p>Program objective: Introduce and promote uptake of the GLEC Framework (the global method for logistics emissions accounting and reporting) to China</p>	<p>Partners:</p> <ul style="list-style-type: none"> • China Federation for Logistics Procurement (linked to NDRC) • EU-China Chamber of Commerce (and possibly other CoCs) • CAT / Research Institute of Transport Science (Ministry of Transport) • China National Standard Committee • WRI, CDP
<p>Target audience:</p> <ul style="list-style-type: none"> • 1000 multinational shippers in China (members EU-China CoC) • Large carriers/LSPs in China (3,500 with 50+ trucks, 38,000 with 10-50 trucks, most are members of CFLP and its Star Fleet Program) 	<p>Value proposition:</p> <ul style="list-style-type: none"> • Quantify logistics emissions to help your company to report (to customers, headquarters, other), set targets, identify solutions, and track progress • Credibly report emission reductions from implemented actions/solutions
<p>Strategies/activities:</p> <ul style="list-style-type: none"> • Develop China version of GLEC Framework (link SF Training program) • Develop and deliver training courses on China GLEC Fw • Advocate for China GLEC Framework as the industry norm by China government, partners, shippers • Develop and roll out other services: advice/validation and accreditation 	<p>Services:</p> <ul style="list-style-type: none"> • Training GLEC Framework / China standard (link SF Training program) • Advice/Validation on calculated emissions: organizations, projects, actions • Advice on building calculation tools in China • Accreditation of calculation tools in China
<p>Outcomes:</p> <ul style="list-style-type: none"> • China has a standard for logistics emissions accounting aligned with the GLEC Framework and endorsed as the industry norm by leading industry associations, shippers/buyers, and China government • More companies in China quantify emissions and report emission reductions from implemented actions/solutions 	<p>KPIs:</p> <ul style="list-style-type: none"> • Number of companies trained on GLEC Fw • Number of companies that start calculating logistics GHG emissions for China operations (and confirm if they use the GLEC Framework) • Number of companies that report emission reductions from implemented actions / solutions
<p>Funding:</p> <ul style="list-style-type: none"> • Foundations/funders for strategies/activities • Shippers/LSPs and service providers for SFC services 	<p>People:</p> <ul style="list-style-type: none"> • Staff: GLEC Technical Manager (to be recruited), GLEC Coordinator (to be recruited), Smart Freight Training Coordinator (to be recruited), Service Dev Manager (in place) • Experts: training and service delivery (in-house consultant)



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