

Life-Links: resilient supply chains for good

www.life-links.org. In collaboration with Kuehne Climate Center.
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The problem

Supply chains are the veins of the global economy, and trade represents 59% of the world's GDP. But if the weakest links of a supply chain breaks, all suffer, especially the most vulnerable. Climate change is a growing threat to supply chains with huge impacts everywhere, with the Global South the hardest hit. Droughts cost the Panama Canal 100 million dollars income per month. Damage from Hurricane Maria cost the island of Dominica twice its GDP. Insurers lost a record 64 billion dollars from extreme weather events last year. Floods in Pakistan, East Africa, Germany, Brazil, wildfires in California and Australia, and combined floods, droughts and heatwaves in China cost lives and crops, close factories, and damage homes and infrastructure critical to supply chains and local communities.

The WEF Global Risk Survey ranks climate risk and failure to adapt very highly, and nine out of 10 people want more climate action. Governments and companies are trying but responses to disruptions remain reactive and localized. Companies are also struggling to reduce 'scope 3' greenhouse gas (GHG) emissions as they need the help from their supply chain partners. Market failures are at the heart of the challenge, caused by fragmented supply chains, prioritization of short-term challenges like inflation and conflicts, and lack of consumer awareness.

The solution: Life-Links

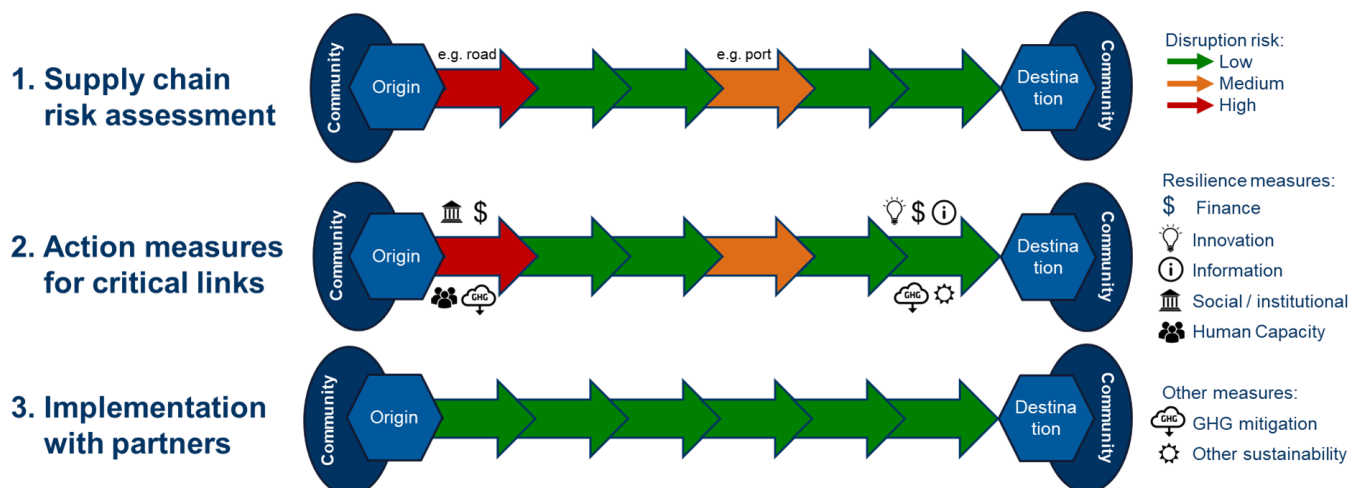
Supply chains are our lifelines. Our **vision** is to turn these physical and symbolic links between producers and consumers into resilient supply chains around the world as a force for good benefiting all stakeholders whose prosperity depends on supply chains.

Our solution is '**Life-Links**' to make supply chains more resilient in the face of climate change and other threats, while seeking opportunities for GHG reductions and sustainability improvements at the same time. By leveraging the self-interest of all stakeholders, companies, development agencies and others co-invest and collaborate on concrete measures to strengthen critical links in supply chains. This integration of adaptation/resilience, GHG mitigation, and finance helps to deliver on the Paris Agreement goals, and bridge the annual \$4.5-10 trillion climate finance gap.

Life-Links are created in three steps:

- Supply Chain Assessment** to understand climate change induced/exacerbated risks and impacts. For example, a Kenyan farmer and a European food retailer both lose income if vegetables are stuck in a port after a storm.
- Action Measures for critical links** to increase resilience, while also seeking opportunities to reduce GHGs and improve sustainability across the supply chain. Examples are flood protection of ports and warehouses, better road infrastructure, and emergency alerts for factories or drivers. In parallel, install solar panels, introduce electric vehicles, plant mangroves, educate port operators, or other sustainable development actions.
- Implementation with Partners** of feasible measures and long-term collaboration, with fairly shared costs and benefits – there must also be a business case. This is an opportunity to harness private/corporate capital, assets and expertise that complement development aid and philanthropy. This may in practice mean that the European food retailer co-invests in better roads in Kenya that connect vegetable wholesalers to the port of Mombasa, or that a logistics company makes its warehouses available for emergency response management.

Everybody wins: local communities, farmers, governments, companies, insurers, development agencies, consumers.



Life-Links: what we will do

Life-Links aims to mobilize industry, the development community and other stakeholders to collaborate and co-invest in making critical links in their supply chains more resilient and sustainable. Life-Links was a finalist in [UNCTAD's Supply Chain Innovation Challenge 2024](#) and co-moderated the [COP29 Transport roundtable](#). The Kuehne Climate Center provided seed funding for a dedicated Life-Links non-profit organization. A Life-Links Council of 25 experts brings different areas of expertise and perspectives of supply chain actors and solution providers in the Global South and Global North.

Our strategy to deliver our vision includes:

1. Develop Life-Links Framework and playbooks

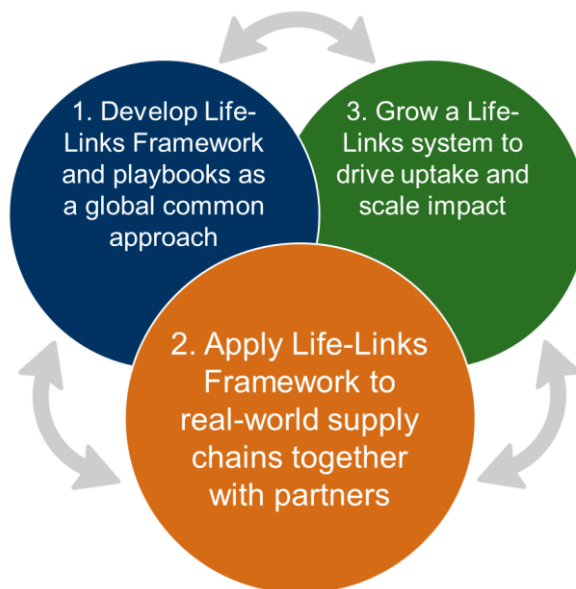
An [IPCC](#) report on climate adaptation noted *"The lack of a comprehensive conceptual framework that facilitates a common multidisciplinary risk evaluation impedes the effectiveness of disaster risk management and adaptation to climate change"*. For this reason, the first focus of the global initiative is on developing the **'Life-Links Framework'** as a globally harmonized approach to making supply chains more resilient and sustainable – link by link. A first framework will be ready by COP30, covering the three steps (assessment, action measures, implementation) with supporting KPIs, is practical for supply chain stakeholders to use, and identifies clear benefits for all. The aim is build on (not replace) existing guidelines or initiatives and resolve inconsistencies and gaps, while putting supply chains and its stakeholders at the center. This will be supplemented with playbooks for practical implementation considering different geographies, sectors, products and stakeholders.*

2. Apply the Life-Links Framework to real-world supply chains

Seeing is believing. The development of a Life-Links Framework will go hand in hand with applying the three steps to real-world supply chains, together with partners. The first focus will be on logistics elements of supply chains for products that meet primary needs (e.g. food/medicines) or where an economic dependency exists (e.g. copper). The Kuehne Climate Center leads the application to three agricultural and other supply chains originating in East Africa going to Europe. Ideally this is supplemented with applications to supply chains originating in Latin America (with Sustentar and other partners) and in Asia and going to markets worldwide.

3. Grow a Life-Links system to drive uptake and scale impact

Our 2030 goal is that the Life-Links Framework and supporting playbooks are used effectively by stakeholders, and governments, businesses and the development community proactively facilitate and support this. We will grow a Life-Links system to drive uptake of the framework and scale practical applications that covers implementation, digitalization and interoperability, stakeholder engagement, communication, advocacy; and capacity building - supported by a workable governance structure.



Leading examples of supply chain guidelines and tools

- International government organizations: [UNDRR](#) - Framework for comprehensive risk assessment and planning in the context of climate change; [UNCTAD](#) – Guidebook for Ports; [OECD](#) - policy tools for resilient supply chains
- Bilateral development agencies: Germany [GIZ](#) - Climate Risk Management (CRM) framework and a 6-step climate risk assessment (CRA) methodology; [USAID](#) - Climate Risk Management Toolkit
- Development banks: [World Bank](#) - Climate Toolkits for Infrastructure PPPs; [IDB](#) - Disaster and Climate Change Risk Assessment Methodology; [UNEP's](#) Adaptation and Resilience Investor Collaborative's Measurement Framework for Investors
- NGOs: [Global Center on Adaptation](#) – Climate-Resilient Infrastructure Officer Handbook; [ICSI](#) – Port Resilience Framework for Action; [Global Alliance for Improved Nutrition \(GAIN\)](#) Supply Chain Analysis for Nutrition (SCAN)
- Business networks: [Business Continuity Institute \(BCI\)](#) Supply Chain Resilience annual surveys; [ResilienceFirst](#) – Business Framework for Building Climate Resilience (in development)
- Insurers: [MCI](#) Integrating Insurance into Climate Risk Management [MunichRe](#) Location Risk Intelligence
- Consultancies: [Accenture](#), MIT, SAP - Supply Chain Resilience Stress Test; [Everstream](#) – Reveal digital tool for business supply chain risks; [ORIS](#) Materials Intelligence platform on infrastructure materials sourcing, climate projections, socio-economic assessments, adaptation and mitigation measures; [CelsiusPro](#) and the NCCS-Impact, [ClimateSense](#) tools for adaptation pathways; [Resilinc](#) Disruption Vulnerability Index; [Project44](#) digital platform; [AIMMS](#) SC Navigator, [Microsoft](#) Dynamics 365 Supply Chain Management

* This is based on the success of the ['GLEC Framework for Logistics Emissions Accounting and Reporting'](#) by Smart Freight Centre (founded by Sophie Punte) and its Global Logistics Emissions Council (GLEC) of companies, associations, initiatives, other stakeholders and experts. Today, this GLEC Framework, together with a growing suite of supporting guidelines, is used by thousands of companies to track emissions and reductions, and is embedded in ISO standards, regulations and disclosure platforms for customers, investors, government and the public.