

D-5a. Guidelines www.life-links.org/docs/framework

The Life-Links Framework builds on existing guidelines – the main ones are listed in Table D-5a below, while acknowledging that many more guidelines exist. For each guideline the most relevant uses for the Life-Links steps are explained. Last updated: January 2026.

Guidelines and relevance to Life-Links steps			
Author	Title	Description	Main uses for Life-Links steps
Asian Development Bank	Disaster-Resilient Infrastructure – unlocking opportunities for Asia and the Pacific ¹	Report for national governments, sectoral ministries, and infrastructure owners/operators with 16 opportunities to strengthen infrastructure resilience, considering the full asset life cycle, accounting for benefits for all stakeholders, improving risk information, and coordination between decision makers	<ul style="list-style-type: none"> • Consideration of people and economies as users of infrastructures (step 0.3) • Determination of how costs and benefits are shared – risk sharing (step 3.1) • Identification of financing and funding opportunities for action measures (step 3.2)
Department for International Development (DFID)	Sustainable Livelihoods Guidance Sheets ²	Guidance to help understand and analyze the livelihoods of the poor and assess the effectiveness of existing efforts to reduce poverty. It covers vulnerability (trends, shocks, seasonality), livelihood assets (human, social, natural, physical and financial capital), public and private sector structures, and livelihood strategies and outcomes	<ul style="list-style-type: none"> • Identification of communities and consumers and their interests/needs (step 0.3) • Safeguarding and consideration of sustainability for the package of measures (step 2.3) • Fair sharing of costs and benefits (step 3.1)
German Agency for International Cooperation (GIZ)	Climate Risk Management (CRM) framework ³ and a 6-step climate risk assessment (CRA) methodology ⁴	Guide for managing climate-related risks including climate risk assessment, measures to minimize losses, and decision-making and implementation in national policy planning and governance systems – supplemented with case studies from Tanzania and India	<ul style="list-style-type: none"> • Assessment of climate-related risks and impacts (step 1) • India example includes action measures for improved transport infrastructure at the community level (step 2.1)
Global Alliance for Improved Nutrition (GAIN)	Supply Chain Analysis for Nutrition (SCAN) ⁵	Guidance for analyzing specific food supply chains for their current and potential impact on nutrition, covering three dimensions: characteristics of the food environment, aspects of the supply chain, and stages of the supply chain	<ul style="list-style-type: none"> • Mapping of supply chains for agri-food products (step 0.2) • Identification of stakeholders and their contribution for agri-food supply chains (step 0.3)
Global Center on Adaptation (GCA)	Climate-Resilient Infrastructure Officer Handbook ⁶	Guidance, tools and knowledge for practitioners on how to integrate climate resilience into the infrastructure public-private-partnership (PPP) project cycle (identification, appraisal, tender and award, and contract management	<ul style="list-style-type: none"> • Identification of stakeholders and their contribution (step 0.3) • Examples of resilience solutions for transport infrastructure (step 2.1) • PPPs as a contracting structure for collective investment by partners (step 3)

Guidelines and relevance to Life-Links steps			
Author	Title	Description	Main uses for Life-Links steps
Inter-American Development Bank (IDB)	Disaster and Climate Change Risk Assessment Methodology ⁷	Technical guidance identifying, assessing, and managing disaster and climate change risks in projects financed by the IDB, including a list of 100+ available programs/software models, and a list of resilience options for roads and bridges	<ul style="list-style-type: none"> Assessment of climate-related risks and impacts (step 1) Resilience measures applicable to roads and bridges (step 2.1)
International Association of Ports and Harbours (IAPH)	IAPH Risk and Resilience Guidelines for Ports ⁸	Guideline for port authorities to establish an effective risk and resilience strategy: define and inventorize risks, manage stakeholders, and build a resilient operational model	<ul style="list-style-type: none"> Identification of stakeholders for ports (step 0.3) Identification of hazards and exposure and factors of influence in a port context (step 1.1)
International Coalition for Sustainable Infrastructure (ICSI)	Port Resilience Framework for Action ⁹	A holistic framework to enhance port resilience through 10 goals and actions across three dimensions (economy and society; leadership and strategy; infrastructure and ecosystems)	<ul style="list-style-type: none"> Identification of stakeholders, their contribution, and key benefits in a port setting (step 0.3) Consideration of communities – equity, justice, inclusion (step 2.3)
International Transport Forum (ITF)	Transport System Resilience – Summary and Conclusions ¹⁰	Resource on disruptions to transport systems (climate, pandemics, geopolitical conflicts), predicting vulnerabilities, policy measures (avoid, coping, redundancy), and recommendations	<ul style="list-style-type: none"> Hazards, vulnerabilities, cascading effects (step 1.1, 1.2, 1.3) Policy measures to increase transport resilience (step 2.3)
International Transport Forum (ITF)	Enhancing the connectivity, sustainability and resilience of regional freight transport in Central Asia + four working papers ¹¹	Report summarizing a study on large-scale regional freight transport infrastructure projects and policy pathways for six countries in Central Asia, examining how policies and infrastructure investment can help to achieve connectivity, decarbonization, and resilience goals across the region.	<ul style="list-style-type: none"> Identification of action measures (step 2.1) Assessment of resilience effectiveness of measures based on resilience attributes (step 2.2)
Munich Climate Insurance Initiative (MCII)	Integrating Insurance into Climate Risk Management: Conceptual Framework, Tools and Guiding Questions: Examples from the Agricultural Sector ¹²	A framework and step-by-step guidance, tools and questions for integrating insurance solutions into climate risk management strategies following disaster risk management phases (prevention, retention and transfer, preparedness, response and recovery), and specifically focusing on the agricultural sector	<ul style="list-style-type: none"> Identification of stakeholders and their needs (step 0.3) Assessment of climate-related risks and impacts (step 1) Role of insurance in action measures that build resilience (step 2.1)
OECD	OECD Supply Chain Resilience Review ¹³	Approach to navigating supply chain risks without undermining the upside benefits that come with global trade, drawing on a review of OECD's work, data, indicators and monitoring of supply chains.	<ul style="list-style-type: none"> Understanding of various strategies for resilience in supply chains (step 2.1) Identification of relevant government policies and plans and trade-offs (step 2.3)

Guidelines and relevance to Life-Links steps			
Author	Title	Description	Main uses for Life-Links steps
PIANC (World Association for Waterborne Transport Infrastructure)	Climate Change costs to Ports and Waterways: Scoping the Business Case Assessment for Investment in Adaptation ¹⁴	Guidance on the factors that are the most appropriate to the business case for adaptation planning and intervention for ports at the levels of facility/asset; transportation; supply chain; or wider safety, social and environmental context	<ul style="list-style-type: none"> Assessment of feasibility and resilience effectiveness (step 2.2) Value proposition and business case (step 3.1) Identification of financing and funding opportunities for action measures (step 3.2)
PIARC (World Road Association)	PIARC International Climate Change Adaptation Framework ¹⁵	Framework to help organizations identify adaptation principles and increase the climate resilience of road transportation assets, operations, and services, in four stages: preparation, assessment pathways, adaptation measures, and incorporating findings.	<ul style="list-style-type: none"> All steps from a road perspective, especially: defining a road or road segment as critical link (Step 0.2), exacerbating effects from climate change (step 1.3), selection of measures (step 2), and committing to a package of measures (step 3.1)
UN Conference on Trade and Development (UNCTAD)	Building Capacity to Manage Risks and Enhance Resilience - Guidebook for container ports ¹⁶	Step-by-step approach for ports to build resilience before, during and after disruptions caused by natural and human-made hazards, supported by case studies for 23 ports.	<ul style="list-style-type: none"> Define critical link in a port setting (step 0.2) Identification of stakeholders (step 0.3) Assessment of climate-related risks and impacts (step 1) Identification of resilience measures for ports (Step 2.1) and indicators for resilience (step 2.2.)
UN Development Programme (UNDP)	Climate and Disaster Risk Finance and Insurance (CDRFI) in National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs) ¹⁷	Review on how CDRFI can be integrated in national climate plans (NAPs and NDCs), combining risk reduction, adaptive strategies and financial protection instruments; grouped as before (ex-ante) and after (ex-post) shocks and for recurring small scale (risk retention) and low-frequency severe (risk transfer) events.	<ul style="list-style-type: none"> Identifying relevant government policies and plans (step 2.3) Analyzing options for financing of the action measures included in the package (step 3.2)
UN Economic Commission for Europe (UNECE)	Towards climate resilient transport systems. ¹⁸	Resource on transport system resilience including future climate conditions; supportive policies and legislation (international and EU levels); climate impact assessment methods; adaptation measures (across structural/physical, social and institutional, and including mode-specific examples); and case studies	<ul style="list-style-type: none"> Identification of climate hazards for transport (step 1.1) and impact assessment (step 1.3) Identification of action measures (step 2.1) Identification of institutional measures; and maladaptation examples (step 2.3)
UN Environment Programme (UNEP)	Adaptation & Resilience Impact – a measurement framework for investors ¹⁹	Guidance for assessing the positive adaptation and resilience impacts of investment; embedding impact assessment in the investment cycle; and setting supportive metrics for people, planet and economy	<ul style="list-style-type: none"> Metrics and indicators for impacts for stakeholders (step 1.2), feasibility assessment (step 2.2), and monitoring (step 3.2)

Guidelines and relevance to Life-Links steps			
Author	Title	Description	Main uses for Life-Links steps
UN Office for Disaster Risk Reduction (UNDRR)	Technical guidance on comprehensive risk assessment and planning in the context of climate change ²⁰	Guidance on conducting risk assessment of climate change withing broader human and ecological systems, integration of results into decision-making and planning processes of governments, and dealing with challenges	<ul style="list-style-type: none"> Assessment of climate-related risks and impacts (step 1)
UN Office for Disaster Risk Reduction (UNDRR)	Handbook for Implementing the Principles for Resilient Infrastructure ²¹	Guidance for countries in enhancing the resilience of their infrastructure systems. Key actions are provided for each of the six Principle for Resilience Infrastructure, combined with stakeholder roles and performance indicators, along with a governance framework.	<ul style="list-style-type: none"> Identification of stakeholders (step 0.3) Value proposition / benefits for different stakeholders (step 3.1) Stakeholder roles (step 3.2)
UN Office for Disaster Risk Reduction (UNDRR)	Nature-based Solutions for comprehensive disaster and climate risk management ²²	Toolkit to support countries in making nature-based solutions (NBS) an integral part of planning and implementation of disaster risk reduction and climate change adaptation	<ul style="list-style-type: none"> Identification of action measures that build resilience to include NBS (step 2.1) Assessment of feasibility and resilience effectiveness of NBS (step 2.2) and safeguards concerning nature (step 2.3)
US Agency for International Development (USAID)	Climate Risk Screening and Management Tools ²³	Tools to support climate risk screening and management in strategy, project and activity design, across nine sectors, such as agriculture, disaster readiness, health, governance, education, and infrastructure, construction, and energy	<ul style="list-style-type: none"> Assessment of climate-related risks and impacts (step 1) and measures/ opportunities (step 2.1) at the sectoral level
World Bank	Climate Toolkits for Infrastructure PPPs ²⁴ and for Roads ²⁵	Framework and guide for integrating climate considerations into the project selection, preparation, structuring considerations and tender process of infrastructure projects delivered through public-private partnerships (PPPs)	<ul style="list-style-type: none"> Embedding the Life-Links concept into PPP projects (steps 1, 2 and 3)
World Bank	Disaster and Climate-Resilient Transport Guidance Note ²⁶	Strategic guidance to integrate climate resilience into investments in every phase of transport infrastructure life-cycle (system planning & financing, engineering & design, operations & maintenance, contingency planning, and institutional capacity & coordination), supported by case studies, best practices, and indicators.	<ul style="list-style-type: none"> Resilience measures for roads, urban transport, railways, maritime/inland waterways, aviation, coastal (step 2.1) Indicators for feasibility assessment (step 2.2), and monitoring (step 3.2)
World Bank	Low-Carbon and Climate-Resilient Rural Logistics in the Sahel: Strategic Framework for Investment Planning ²⁷	Strategic framework that integrates climate considerations to evaluate social and economic development through rural transportation and logistics solutions in the Sahel region. It guides investment across the logistics system, integrated with supply chains, with indicators for investment appraisal.	<ul style="list-style-type: none"> Identification of communities and local consumers and their interests/needs (step 0.3) Identification of logistics challenges related to rural roads (step 1.2) exacerbated by climate (step 1.3)

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Author	Title	Description	Main uses for Life-Links steps
			<ul style="list-style-type: none"> • Identification of action measures, feasibility analysis for logistics nodes, and safeguarding (step 2)
World Bank	Transport Connectivity for Food Security in Africa – Strengthening Supply Chains ²⁸	Book that explores the relationships between transport, logistics and food security, and identifies vulnerabilities and opportunities along the entire food supply chain in order to improve the resilience of food systems in Africa.	<ul style="list-style-type: none"> • Identification of broader exposure (step 1.1), vulnerabilities and impacts (step 1.2) • Identification of resilience measures for roads, logistics (step 2.1) and broader measures that improve connectivity (step 2.3)
World Bank	Transport Resilience Financing, Resources and Opportunities (English) ²⁹	Information on 42 global financing facilities, 33 public funds, and 29 tax measures, offering valuable insights into financing transport resilience in developing countries	<ul style="list-style-type: none"> • Identification of financing and funding opportunities/mechanisms for action measures (step 3.2)
World Bank	Sub-sectoral Roadmaps to Promote Private Sector Participation in Transport Resilience: Roads, Railways, and Urban Transport ³⁰	Roadmaps include risk assessment and project pipeline development, incorporating resilience considerations for private sector participation projects, and funding and financing.	<ul style="list-style-type: none"> • Building the case for private sector participation and investment for resilience of roads and railways infrastructure (step 3.1)
World Business Council for Sustainable Development (WBCSD)	Adaptation Planning for Business – Navigating uncertainty to build long-term resilience ³¹	A guide supporting businesses to integrate adaptation and resilience across the whole business, covering: set the scope and goals; design adaptation solutions; build the plan & implement; and monitor & evaluate. (Forthcoming: CEO Handbook on Addressing Physical Risks in Value Chains)	<ul style="list-style-type: none"> • Feasibility assessment of measures (step 2.2) • Development of implementation plans from a company perspective (step 3) • Building the business case (step 3.1)
Zurich Climate Resilience Alliance (ZCRAlliance)	Adaptation finance and the private sector: opportunities and challenges for developing countries ³²	Overview of the potential for the private sector to help bridge the adaptation finance and funding gap in developing countries under current scenarios and with innovation, including for transport infrastructure.	<ul style="list-style-type: none"> • Identification of financing and funding opportunities/mechanisms for action measures (step 3.2)

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