Transport

Sector Note on Applying the World Bank Group Paris Alignment Assessment Methods

This Sector Note outlines the sector-specific issues for applying the World Bank Group (WBG) Paris Alignment (PA) assessment methods to operations with transport sector activities. The Note is not a stand-alone document and should be used in conjunction with the applicable WBG PA assessment methods[1] for demonstrating alignment. The Note will be updated from time to time to capture the lessons learned; incorporate progress, breakthroughs, and developments in technologies, policies, practices, and consumer behavior; and reflect the evolving pipeline of the WBG's transport-related operations. The relevant activity types for the transport sector operations addressed in other Sector Notes are (i) supply and storage of fossil fuels, which are covered by the Energy and Extractives Note; (ii) energy and fuel subsidy reform, covered by the Energy and Extractives Note; and (iii) buildings covered by the Urban, Disaster Risk Management, Resilience, and Land Note.

The Transport sector is important for both development and climate action. Economic development requires the transportation of people and goods, but like other development activities, it may be associated with greenhouse gas (GHG) emissions. Developing countries have significant transport investment needs to enable development, and transport sector investments have multi-faceted development objectives including mobility, accessibility, connectivity, efficiency, inclusion, affordability, safety, and security, as well as climate mitigation and adaptation. The challenge—and opportunity—is to reconcile the growing demand for clean, safe, and affordable mobility in developing economies with the imperative for global climate action and improved resilience. The Transport sector has a key role to play in contributing to meeting the countries' mitigation goals under the Paris Agreement, while also facilitating resilience outcomes both within the transport sector and in conjunction with other sectors.

1. Investment operations: Main considerations in assessing Paris Alignment of Transport sector operations

This section describes the assessment of transport investment operations according to the primary transport sector business lines: (i) Rural and Interurban Roads, (ii) Urban Transport, (iii) Railways, (iv) Ports, Maritime, and Inland Waterway Transport, and (v) Air Transport.

Mitigation

The PA assessment includes assessing that the activity being financed is consistent with (does not hinder) the country's Nationally Determined Contribution (NDC), Long-Term Strategy (LTS), or other climate-related strategies and policies, taking into account WBG's own climate analysis such as Country Climate and Development Reports (CCDRs) and checking if the activity is universally aligned or non-aligned according to the respective lists. Transport-related activities on the universally aligned list that meet the relevant conditions defined in the WBG PA assessment methods will be considered aligned on mitigation and no further assessment is needed. For operations with activities that are not on the list, the mitigation assessment approach laid out in the WBG PA assessment methods will be followed to assess the operation's alignment with the Paris Agreement's mitigation goals to determine the risk of an operation having a negative impact on the country's low-GHG emissions development pathways, and modify the

[1] WBG PA assessment methods are conceptually consistent with the joint MDB Paris Alignment Approach (MDB PA Approach) and consist of the following: (a) For the **World Bank**, the World Bank Paris Alignment (PA) Methods (WB PA Methods) are applicable to operations under three financing instruments—(i) Investment Project Financing (IPF), including operations using Financial Intermediaries, (ii) Programs for Results (PforR), and (iii) Development Policy Financing (DPF). (b) For **IFC** and **MIGA**, the assessments apply the MDB PA Approach to operations under Direct Investment Operations, Financial Intermediaries, and Corporate General Purpose (CGP) Financing. The MDB PA Approach for CGP Financing applies only to IFC and MIGA.

activity design if needed.[2] The risk assessment takes into account the country and sector context, including that low- and middle-income countries (LMICs) have essential development needs to be addressed, typically have low GHG emission trajectories, and have historically contributed little to global GHG emissions. As such, the risk assessment should consider the specific country and project/program development context, including economic, institutional, and technical feasibility and market considerations, as well as the specific private sector considerations. The risk assessment of projects includes consideration of feasible lower-GHG emissions alternatives,[3] carbon lock-in risk, and transition risk. The appropriate risk assessment approach and risk mitigation measures will depend on both the nature of the WBG operation and the level of the broader WBG country engagement with the private or public counterparts (e.g., in applying system-wide or asset-level assessment).

Rural and Interurban Roads

Road transport is the primary mode to meet passenger and freight transport needs in most developing countries and may be the only feasible option to meet mobility needs. Road infrastructure is and will be necessary for supporting a low-carbon transition, especially when it is designed to enable electric mobility and provide the necessary infrastructure for public transport, walking, and cycling. At the same time, road transport emissions from private vehicles make up the largest share of transport GHG emissions worldwide, with the level of emissions from road transport varying significantly across countries and road categories.

Rural roads are included in the universally aligned list, including all-weather roads providing access to rural communities, such as those connecting farmers to markets or rural residents to schools, hospitals, and social services, except if there is a risk of contributing to deforestation. Activities supporting road upgrading, rehabilitation, reconstruction, and maintenance without capacity expansion are also universally aligned for all categories of road infrastructure.

For other road categories and investments, operations will be assessed based on the specific country and sector circumstances and project context, which will include the level of road access and connectivity, road functional classification, scope of improvement and investment, availability of lower-carbon alternatives that are feasible in the project area, and impact on GHG emissions from new vehicle traffic.

Operations supporting interurban road capacity expansion (i.e., road widening for general traffic) and greenfield construction will carry out mitigation risk assessments. This will include considering whether there are lower GHG emissions alternatives that can meet the same development objectives,[4] whether the carbon lock-in risk is low, and whether the transition risks are low by introducing the shadow price of carbon as part of the economic analysis, where appropriate. Sectoral circumstances and available studies will be considered to establish whether there is no feasible lower-carbon alternative to road capacity expansion or greenfield construction to achieve the same development objectives. While a range of low-emission alternatives are assessed based on the project and country contexts, it is often the case that the two main low-carbon alternatives to interurban roads (i.e., railways and waterways) are not substitutes for economically viable road widening or new road construction in many country and geographic contexts, in particular where the level of road access and connectivity, and the motorization rate, are low. Therefore, relevant mitigation

[2] For World Bank investment operations, the question of the economic viability after accounting for transition risks, is not applicable to Technical Assistance components.

[3] The assessment should focus on feasible lower-GHG emissions alternatives. "Feasible" means "commercially available, technically and financially viable" for IFC and MIGA and "technically feasible and economically viable" for the World Bank.

[4] "Development objectives" means Project Development Objective (PDO) for the World Bank, and anticipated Development Impact for IFC and MIGA.

measures can be developed to address and reduce risks of carbon lock-in and transition risks to the future decarbonization of road transport.

Main measures to address risks on mitigation: Risks identified should be mitigated or managed through appropriate measures for decarbonizing road transport[5] such as the "Avoid-Shift-Improve"[6] framework used by the World Bank, many governments, and development partners. The appropriate and relevant good practice measures could be included in the project design by adding project activities or technical assistance; or supported as part of a parallel policy dialogue with the government. The mitigation measures for interurban road operations include motorization management, green freight logistics, multimodality, and other appropriate measures[7] to reduce the GHG emission impacts depending on the country and sector context. The applicability of such measures depends on local conditions and practices, including technology access, institutional and financial capacity, as well as economic viability.

Urban Transport

As many developing countries urbanize, effective urban transport systems are essential for economic and social development, including accessibility to jobs and services, and realizing the agglomeration benefits offered by cities, while also putting cities on a sustainable low-carbon pathway. Activities related to urban transport operations in the universally aligned list include electric and non-motorized urban mobility.

In addition, activities supporting public transport and mass transit, complete streets including active mobility and people-centered traffic management, and Intelligent Transport Systems (ITS) and related technologies are the mainstay of WBG urban mobility operations. These activities are key interventions in the Avoid-Shift-Improve framework to decarbonize transport and are not expected to have a negative impact on the country's low-emissions development pathways.

Operations financing Internal Combustion Engines (ICE) vehicles for the transport of people or goods should carry out mitigation risk assessments, including the appropriateness of electric mobility or other lower emission alternatives considering local conditions, available technologies, and the feasibility of such investments.[8] Operations should document efforts to address constraints to using lower emission alternatives and avoiding carbon lock-in over the lifetime of the assets, as well as assess transition risk by introducing the shadow price of carbon as part of the economic analysis, where appropriate. The key alternatives that may be considered in the feasibility analysis are hybrid-electric, full electric, hydrogen fuel cells, or other low or zero-emission fuel-propulsion technologies that may emerge. While the risk of carbon lock-in is generally low for ICE vehicles (e.g., diesel buses) given the limited lifetime of the assets, the assessment should include the potential for fleet renewal for electric vehicles and charging facilities in the future and where appropriate.

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[5] The World Bank's Transport GP has started a program of analytical studies on the relevance and appropriate approaches for decarbonizing the transport sector in developing countries, and has published several reports found under the Transport Decarbonization Investment series describing many mitigation measures. *All Bank references cited in this note can support or inform the PA assessments but are not expected to serve as a required analytical tool for demonstration.*

[6] The **Avoid-Shift-Improve (ASI) framework** calls for measures to *avoid* unnecessary motorized trips based on proximity and accessibility, *shifting* to less carbon-intensive transport modes such as high-occupancy vehicles or non-motorized modes, and *improving* the carbon intensity of the transport system or the efficiency of freight and passenger vehicles. The ASI framework is a well-established approach for addressing climate mitigation in the transport sector and suitable for many developing countries to simultaneously support mobility and development objectives.

[7] For example, promoting improved vehicles standards, inspection, and maintenance programs; regulation of used vehicle imports; freight consolidation strategies; and better integration of railways and/waterways, if these exist in the project area.

[8] Please see the World Bank (2022) report on the "Economics of E-Mobility for Passenger Transport," which provides a detailed analysis of the conditions for the economic and technical viability of electric mobility, and the World Bank (2022) report on Clean Technology Options for Buses – Prefeasibility Analysis.

Operations supporting new urban and suburban road construction, which may generate new traffic and contribute to increasing low-occupancy motorized travel or GHG emissions, should assess whether lower-carbon alternatives, such as public transport, non-motorized transport, managed lanes, or Travel Demand Management (TDM), among others, are feasible and could achieve the same development objectives. Carbon-lock in risk from urban sprawl and dependence on private motor vehicles should be assessed, as well as transition risks.

Main measures to address risks on mitigation: The mitigation risks identified may be mitigated or managed through appropriate measures in the design of the operation or outside the operation, for example through technical assistance activities based on the "Avoid-Shift-Improve" framework. "Avoid" measures may include promoting integration of transport and land-use planning, promoting transit-oriented development, and pricing policies to reduce motorized trips or trip lengths and carbon emissions from low-occupancy vehicles. "Shift" measures may include promoting public transport and non-motorized transport through, for example, adding dedicated bus lanes on urban or suburban roads and other multimodal solutions. "Improve" measures may include greening vehicle fleets, enabling electric mobility or other zero-direct emission transport, motorization management, or green freight logistics.[9]

Railways

Rail transport is generally a more energy-efficient mode than road and air transport alternatives. Rail infrastructure is included in the universally aligned list. However, investments in railways that are exclusively dedicated to transporting coal or peat are considered non-aligned and will not be supported by WBG operations.

Operations financing diesel traction vehicles should assess whether electric rolling stock could be used considering the country and sector context, including the availability of reliable and adequate electricity supply, clean energy sources for electric traction, and the feasibility of such investments. The carbon lock-in risk should also be assessed, including if diesel traction vehicles could be retrofitted when electric technologies are feasible in the country.[10] One way of assessing the transition risk is by introducing the shadow price of carbon as part of the economic appraisal, where appropriate.

Operations supporting railways that transport coal and other fossil fuels as part of their overall rail service should carry out mitigation risk assessments. The assessment of feasible lower-carbon alternatives should consider the potential of the operation to attract freight traffic away from trucks or other higher-emitting modes, and the network effect of the railway operation. For countries with commitments to transition away from coal, operations should not introduce barriers to the country's energy transition plan. The economic analysis should include the shadow price of carbon, where appropriate, and assess the potential impact of a coal phase-out on the viability of the operation considering the available options to diversify the type of freight load.

Main measures to address risks on mitigation: The main risks under the control of the railway sector are the use of diesel traction and its ability to attract traffic from road transport and other modes. In this regard, operations supporting non-electrified rail may incorporate measures that enable the electrification of rail infrastructure in the future. For example, investment in rail signaling should ensure the signaling design and materials allow for later electrification. New diesel traction equipment should allow for

[9] The applicability of such measures is dependent on local conditions and practices, including technology access, institutional capacity, as well as economic and financial viability. For more information and examples, see the World Bank publications under the Transport Decarbonization Investment series.

[10] See World Bank (2022). The Role of Rail in Decarbonizing Transport in Developing Countries.

conversion to alternative power such as electric battery or hydrogen fuel cell at mid-life rebuilding. In addition, the operation could include relevant technical assistance or advisory services to support measures for more efficient planning and use of rail transport resources, for optimizing demand for passenger trips or freight loads, or for designing the rail network to promote a shift from other higher-emitting modes of freight and passenger transport. Such measures are often dependent on local conditions, including local technology access, institutional capacity, topography, economic conditions, and social practices.

Ports, Maritime, and Inland Waterways Transport (IWT)

Waterway transport typically represents the most economical and least carbon-intensive mode for large volumes of freight. Activities supporting port, maritime and IWT infrastructure, as well as short sea shipping, are on the universally aligned list. Investments in ports, vessels, or waterways that are exclusively dedicated to transporting coal or peat are considered non-aligned and will not be supported by WBG operations.

Operations financing vessels using heavy bunker fossil fuels should assess whether alternative fuels or more efficient vessels could be used, taking into account the country and sector context, existing technological options, and the economic viability of such investments. The carbon lock-in risk should be assessed to consider if the vessels could be retrofitted when lower-carbon technologies are feasible in the country, and the transition risk assessed by introducing the shadow price of carbon as part of the economic appraisal, where appropriate. Investments in port digitalization, navigational systems, and improving port-city interfaces[11] are the key components of decarbonizing the freight sector, and present low risk of having a negative impact on a country's low-GHG emissions development pathways.

Operations supporting port infrastructure or waterways handling coal and other fossil fuels as part of their overall business should carry out mitigation risk assessments. This will include demonstrating the operation's potential to move coal and other fossil fuels from higher-emitting modes. The carbon lock-in risk should also be assessed, including if port operations could be used or retrofitted for general goods and when lower-carbon technologies are feasible. For countries with commitments to transition away from coal, operations should not introduce barriers to the country's energy transition plan. The economic analysis should include the shadow price of carbon, where appropriate, and assess the potential impact of a coal phaseout on the viability of the operation considering the available options to diversify the type of freight load.

Main measures to address risks on mitigation: Risks identified should be mitigated or managed through appropriate measures in the design of the port, maritime or IWT operation, technical assistance, or through measures outside the operation. Relevant risk mitigation measures include identifying opportunities to accommodate lower-carbon fuels and zero-carbon technologies; energy efficiency upgrades without expanding the operational lifetime of fossil-fueled equipment; and developing or implementing plans consistent with the decarbonization of the maritime sector.[12]

Air Transport

Air transport, a carbon-intensive mode, is in many circumstances the only feasible mode for long-distance travel and is an indispensable form of connectivity for many remote regions and developing countries—particularly Small Island Developing States (SIDS). Air connectivity contributes to a country's economic

[11] Investments in port-city interfaces should not expand or promote expansion into areas of high carbon stocks or high biodiversity areas, lead to significant conversion of natural habitat, or involve land use change that is likely to reduce carbon stocks.

[12] See World Bank (2021) report on Charting a Course for Decarbonizing Maritime Transport

growth and development, including through tourism and trade. The sector is considered hard-to-abate for climate mitigation, and low or zero-emission fuel technologies for air transport do not yet exist at scale.[13]

WBG operations for air transport mostly include construction or improvement of airport terminals and runways, equipment for air traffic control and safety systems, as well as technical assistance for sector reforms and private sector participation. Operations supporting equipment and systems for air traffic control are important for air safety and air traffic management, and do not typically result in the GHG emissions increase and are therefore expected to have a low risk of negatively impacting a country's low-GHG emissions development pathways.

For operations supporting airport expansion or new (greenfield) airport construction, the assessment considers feasible lower-carbon alternatives to achieve the same development objectives, as well as the risks of carbon lock-in and transition risks, considering the importance of air transport for the country's connectivity and development needs.

Main measures to address risks on mitigation: Risks identified should be mitigated or managed through appropriate measures in the design of the operation or through measures outside the operation. Such measures may include enabling or technical assistance activities for demonstration or deployment of more fuel-efficient or low-emission aircraft; energy efficiency programs and investments in the digitalization of airport operations leading to reduced energy consumption; modernization of air traffic management facilities and equipment for more efficient flightpaths; greening of ground service fleets such as off-road fleets and electric ground tugs; and enabling infrastructure for Sustainable Aviation Fuels (SAFs).

Adaptation and resilience

Assessment of Risk from Climate Hazards consists of assessing the operation's level of exposure to current and future climate hazards and the vulnerability to such hazards, including relevant adaptive capacities of human and natural systems. Transport investments can be severely impacted by climate hazards such as extreme precipitation, flooding, extreme heat, sea level rise, droughts, and storm surge depending on the context and scope of the operation. For example, extreme temperatures affecting the integrity or durability of materials; extreme precipitation causing flooding or landslides; storms and high winds affecting infrastructure, equipment or services; sea level rise and storm surges and droughts; or changes in currents, erosion or sedimentation patterns affecting shipping navigability.

Assessment of risks from climate hazards and their subsequent impact on transport operations is highly location- and development-context specific. Country and location-specific climate information should be used, such as from the World Bank's Climate Change Knowledge Portal, along with expert judgment to determine the climate hazards relevant to the operation. Exposure from relevant climate hazards should be assessed under various climate change scenarios over suitable time frames, based on the nature and lifetime of activities and assets being created or services being provided by the project.[14] For example, airports, seaports, and railway infrastructure have longer economic lifetimes, therefore their risks should be assessed using appropriate time frames and climate scenarios.

An operation's exposure to relevant climate hazards is based on two main factors: (i) whether the operation is in a location and setting where (directly or indirectly) the relevant climate hazards are expected to occur, and (ii) whether the assets, systems, beneficiaries, and/or vulnerable groups might be

[13] See World Bank (2022) report on The Role of Sustainable Aviation Fuels for Decarbonizing Air Transport.

[14] Climate change scenario selection is an important aspect of determining an operation's climate hazard exposure and it is good practice to select at least two climate scenarios, such as a best-case low-GHG emissions scenario and high-GHG emissions scenario.

exposed to these hazards. Certain locations and investments could be highly exposed to climate change; for example, maritime port infrastructure and transport systems in SIDS could be highly sensitive to rises in sea levels and the increased frequency and intensity of extreme weather events (e.g., hurricanes). Once an operation's exposure to relevant climate hazards is known, their impact on activities financed by the operation must be assessed considering level of exposure and sensitivity; and the operation's vulnerability to these impacts should be determined based on its adaptive capacity.

Risk reduction measures should be proportionate to the nature and scale of the potential impact(s) of risks identified on the operation. Climate vulnerability can be addressed through a combination of hard and soft measures that are appropriate for the project's development context. The risk assessment should be used to prioritize climate hazards that need to be addressed by classifying the hazards that pose the highest potential risk to the operation's success based on their nature and scale of impact on the operation. The below provides a non-exhaustive list of illustrative examples of risk reduction and adaptation measures that can be used across various stages of the project's life cycle.

- **Systems Planning:** measures implemented at a system level to ensure future investments are resilient against climate risks, for example integrating climate information (temperature, precipitation, and hydrology projections) into system planning to assess climate impacts on transport infrastructure.
- **Engineering and Design:** considerations which can assist in protecting assets against climate shocks such as expanding drainage along roads, slope stabilization measures, nature-based solutions, and using heat resistant material in the construction of roads, pavements, and runways.
- **Operations and Maintenance:** changes to the operating procedures of entities managing transport assets to proactively reduce the impact of climate shocks, for example by developing standards for periodic maintenance of roads, railways, and bus lanes.
- **Contingency Planning:** measures to better equip entities to cope with climate shocks, such as developing early warning systems, evacuation procedures, and emergency protocols.
- **Institutional Capacity and Coordination:** measures which can enhance the capacity of transport management entities to plan for and cope with climate shocks, such as training on climate risk assessment or emergency response planning.

2. Development Policy Financing: Main considerations in assessing Paris Alignment of Transport sector operations

Transport-related prior actions in Development Policy Financing (DPF) broadly comprise six categories of policies: (i) Green Mobility policies that promote higher-occupancy and lower-GHG emission systems such as public transport, non-motorized transport, electric mobility, as well as strategies such as Motorization Management, fleet modernization, Travel Demand Management, Transit-Oriented Development and digitalization of transport; (ii) Resilient and Safe Transport policies that support the adaptation of transport infrastructure and services against hazards and promote a "safe systems" approach for all transport modes; (iii) Inclusive Mobility and Accessibility policies to improve transport infrastructure and services, especially for underserved groups and areas, to reach jobs and other socioeconomic opportunities; (iv) Connectivity and Supply Chain policies to optimize transport networks and logistics services, improve procedures and operational efficiency, and support regional development, trade, or competitiveness; (v) Transport Institutions and Governance policies to improve planning, implementation, operations, and management of infrastructure and services; and (vi) Transport Funding and Finance policy to promote investment, fiscal sustainability, competition, market-based practices, and innovative financing mechanisms.

Mitigation

Most transport prior actions, particularly under policy areas (i) Green Mobility, (ii) Resilient and Safe Transport, and (iii) Inclusive Mobility and Accessibility are not expected to increase GHG emissions and do not introduce or reinforce persistent barriers to a country's ability to pursue a low-emissions development pathways, and hence are considered aligned. Prior actions that support aligned activities discussed above are also considered aligned.

However, some transport policies may create more favorable conditions for the use of fossil fuels or more carbon-intensive transport modes or technologies, and thereby result in significant increases in transport-related GHG emissions or reinforce persistent barriers to transition to low-emissions development pathways. Prior actions supporting such policies require additional assessment. For example, policies that specifically address fossil-fuel motor vehicles or fuel standards should assess the potential impact on GHG emissions, including the effect on the supply and demand for these vehicles, as well as the availability and affordability of the affected transport services. The assessment should also consider viable alternative pathways with lower GHG emissions that can achieve equivalent development objectives, based on the unique conditions of the country and local context, such as the capacity to implement lower-carbon alternatives, reliable access to electricity or greener fuel supply, and existing levels of transport connectivity or access. A multimodal and interconnected transport system provides greater opportunities to identify and incorporate feasible lower-carbon solutions, as well as more resilient outcomes.

The outcome of the assessment of policies related to (iv) Connectivity and Supply Chain, (v) Transport Institutions and Governance, and (vi) Transport Funding and Finance will largely depend on the transport modes and services affected. These policies should not create more favorable conditions for fossil-fuel based transport modes and services or reduce the usage of lower carbon intensity options. Moreover, these policies should not prevent the transition to or deter future investment in lower-carbon modes and services as they become feasible. For example, the deregulation or reform of trucking services should also consider appropriate strategies for decarbonizing the freight and logistics sector.[15] Policies to increase investment in non-rural road networks should consider the quality of the vehicles on the roads and their enforcement through Motorization Management strategies.[16]

Reducing the risks on mitigation: Risk reduction measures consistent with the "Avoid-Shift-Improve" (ASI) framework for decarbonizing transport are considered. If carbon lock-in risks are identified from transport-related prior actions, it should first be determined if contextual factors or existing institutional frameworks could reduce such risks. If no such factors exist, complementary and credible measures by the government could be added to the policy being supported to reduce such risks to a low level. If relevant, the carbon lock-in risk from transport policies could be addressed through the repurposing of policy support to avoid or reduce the risk of introducing or reinforcing persistent barriers to the use of lower-GHG emissive alternatives without jeopardizing the development objectives.

[15] For more information, see the Bank's publication on Decarbonizing the Freight and Logistics Sector.

[16] Motorization Management includes fuel and vehicle standards, fleet renewal schemes, inspection and maintenance programs, and other measures to manage motor vehicle flows and stocks in a country at all phases of the vehicle lifecycle. For more information, please see the Bank's publications on Motorization Management for Development: An Integrated Approach to Improving Vehicles for Sustainable Mobility and Motorization Management and the Global Trade of Used Vehicles.

Adaptation and resilience

While many transport sector policies are aimed at building resilience, risks from climate hazards could be relevant for certain policy actions whose intended results are indirectly linked to physical asset creation and require further assessment using the process set out in the PA DPF Method. These include policy actions supporting the downstream development of physical infrastructure investments, which require ensuring that climate hazards do not impact their intended outcomes. Prior actions that may support the development of downstream infrastructure, such as policies for public-private partnerships in transport infrastructure, should cite specific country systems, regulations and/or adaptation policies that support risk reduction measures through the appropriate phases of the infrastructure lifecycle from systems planning, engineering and design, operations and maintenance, contingency planning, and institutional capacity and coordination.

Reducing the risks on adaptation: If risks from climate hazards are likely to have an adverse effect on achieving the prior action's contribution to the development objective(s) as described above, risk reduction measures reflecting good sector practice should be incorporated in the program design, bringing residual risks to an acceptable level, in line with the DPF PA guidance. Such measures could include: (i) strengthening the enabling environment within government institutions for climate-resilient transport infrastructure (e.g. improving understanding of climate change risks and uncertainties and supporting decision-making; integrating climate change risk assessments across existing policy processes and decision cycles; and strengthening regulatory standards); and (ii) developing disaster risk management plans and incorporating climate insurance instruments to support response and recovery following an extreme event.