

## CLIMATE SMART PUBLIC PRIVATE PARTNERSHIP

### Context:

According to the World Bank, there is an urgent need for the development and finance of climate-smart infrastructure solutions.

### BACKGROUND:

- The majority of greenhouse gas (“GHG”) emissions today is associated with carbon-intense infrastructure construction and operation, particularly in the energy, public transport, and water supply and sanitation sectors.
- At the same time, it is expected that economies will need to make significant investments over the next 10 - 15 years to build new or to rehabilitate ageing infrastructure to meet the increasing global demand, emerging economies and developing countries accounting for roughly two thirds of global infrastructure investment.
- Many risks associated with climate change will be felt hardest by lower income countries, as their ability to prevent and respond to the impacts of climate change is limited.

### Analysis:

- Private investment and expertise, including **infrastructure finance through public-private partnership (PPP)** models is essential for the delivery of climate-smart infrastructure.
- The application of PPP models presents both challenges and opportunities.
- Given the massive capital requirements and need for innovation (both in terms of technological solutions and funding structures), PPPs potentially provide a useful framework under which the public and private sectors can pool and coordinate their financial and technological resources more efficiently.
- At the same time, climate change creates novel forms of risk which are difficult to quantify and will present unique challenges to public and private sector parties seeking to negotiate an appropriate allocation of risk between themselves.

### Climate-smart infrastructure refers to infrastructure solutions that:

- **Mitigate climate change**, e.g., through reduction of GHG emissions and improved energy efficiency;
- Increase the resilience of infrastructure assets to climate change, i.e., ensure that infrastructure is planned, designed, built and operated in a way that anticipates, prepares for and adapts to uncertain and potentially permanent effects of climate change (e.g. hydropower project that takes into account changes in average and extreme flows in the future, to ensure that financial models that stem from hydrological analyses are correct, or that spillways are correctly sized to avoid dam breaches).
- **Ensure resilience through infrastructure**, i.e., ensure that the new or improved infrastructure does not harm and delivers related benefits to wider systems, communities, households and individuals (e.g., sea barriers, flood protection).
- While infrastructure, such as roads, hydropower projects and water treatment plants, contributes to a large extent to climate change, infrastructure and its services may also become increasingly affected by climate change-related extreme weather events as well as by gradual, longer-term incremental changes. It is therefore essential to incentivize investment in low-carbon PPPs and to ensure that changing climate conditions, disaster risk and potential climate change mitigation and adaptation measures are identified and considered during the development, design and implementation of each individual PPP project.