



COMCEC

## 20<sup>th</sup> Meeting of the COMCEC TCWG

**Rana AKBAŞ**

### Measuring the Environmental Impacts of Transport Infrastructures in OIC Member Countries Project

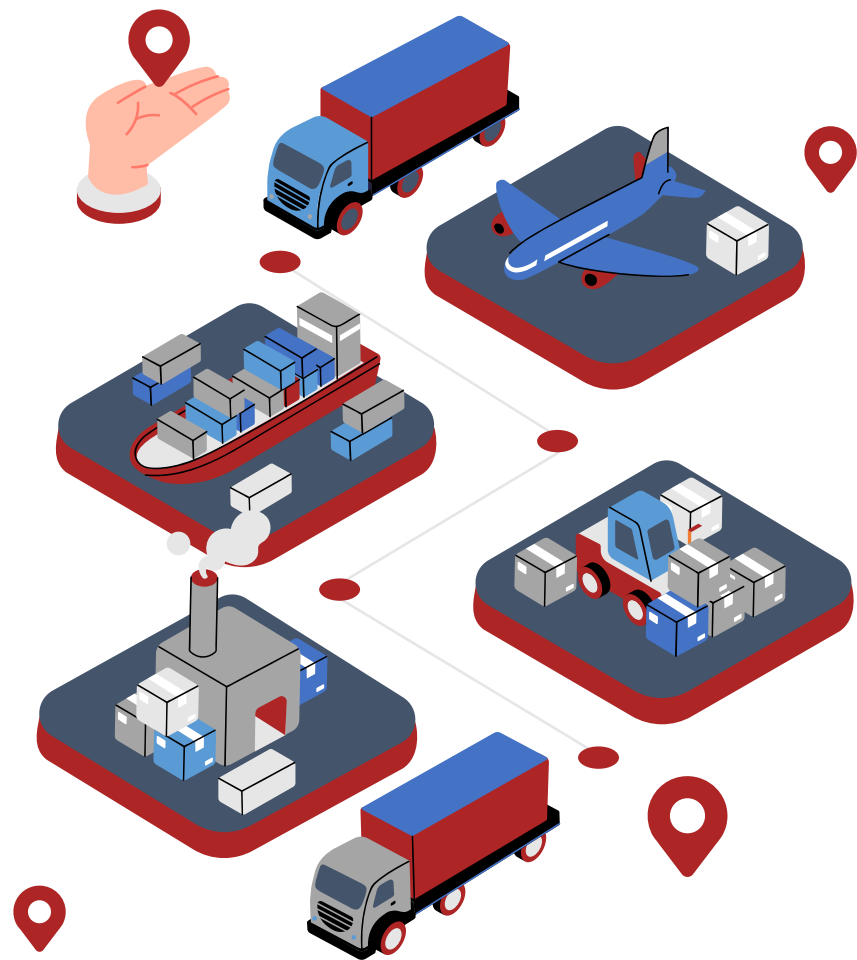
**ESCARUS**

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Conceptual and Methodological Framework of the Guide

03.05.2023

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in OIC Member Countries Project  
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# 01 Introduction

# Resource Scarcity & Climate Change

Earth's climate has changed throughout history. There have been seven cycles of glacial advance and retreat in the last **650,000 years alone**. The ice age, which ended **abruptly about 11,700 years ago**, marks the beginning of the modern climate age and human civilization. Many of these climate changes can be attributed to very small changes in Earth's orbit that change the amount of solar energy our planet receives.

The current warming trend is particularly important. Much of this warming trend is likely the result of human activity since the mid-20th century and has been occurring at an unprecedented rate for millennia.



**Over the last 171 years**, human activities have increased CO<sub>2</sub> concentrations in the atmosphere 48% above pre-industrial (1850s) levels. This change is more than what has happened naturally in the last 20,000 years. (Last Ice Age: 185 ppm – 1850: 280 ppm)

**Today, approximately 1.7 planets are required to meet the consumption of raw materials.**



Extreme events are important because they often cause damage, **both to nature and to people**. The damage caused by extreme events can cost individuals, businesses, and governments a lot of money.

# Global Risks

The Global Risks Report is published annually by the World Economic Forum.

In the report, which reveals the expected risks in the developing world, the biggest global risk in the short term is the "cost of living crisis", and the biggest risk in the medium and long term is the risk of "failure in combating climate change".



## Top 10 Risks

“Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period”

### 2 years



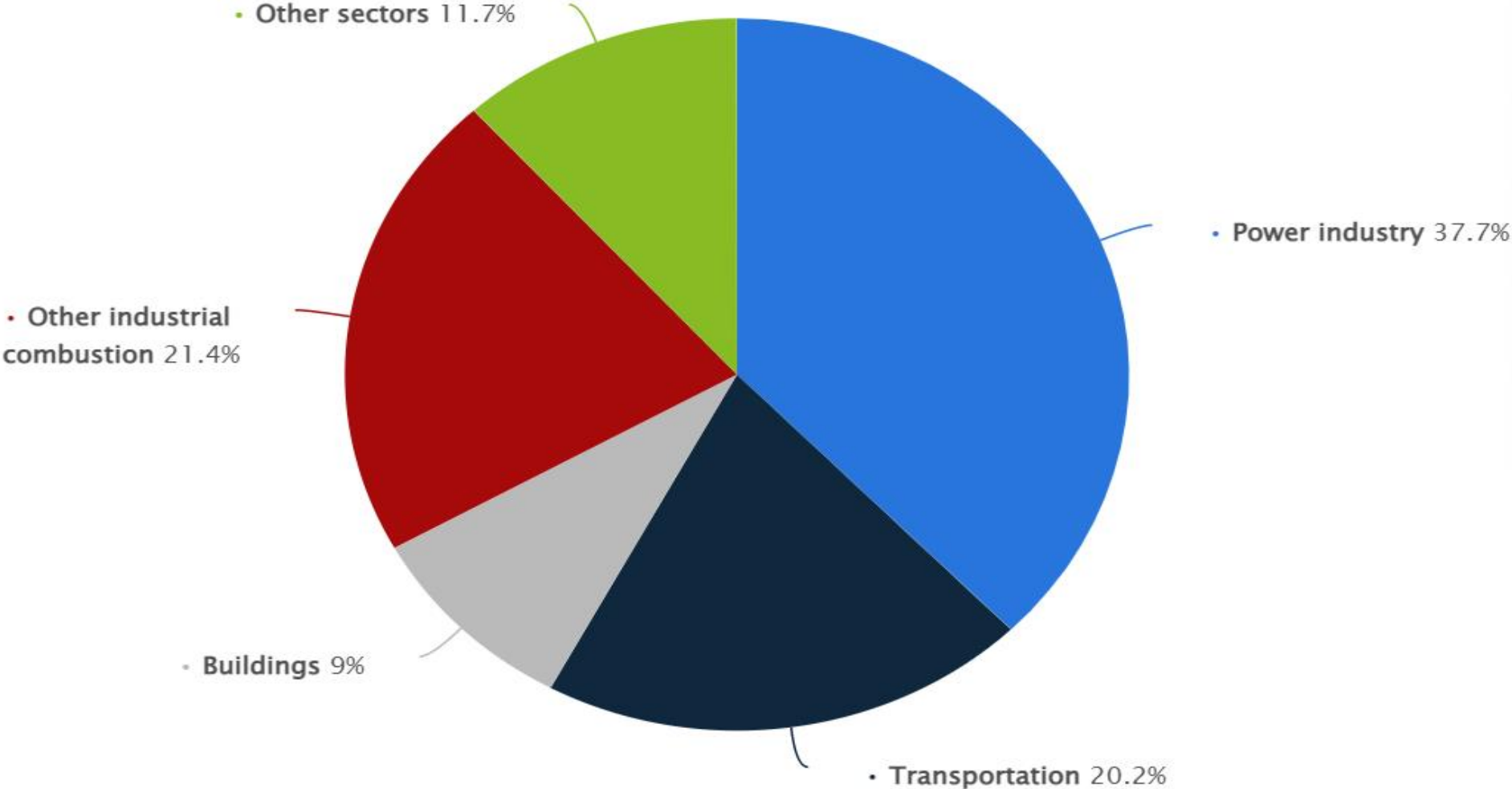
### 10 years



#### Risk categories

- Economic
- Environmental
- Geopolitical
- Societal
- Technological

## Distribution of carbon dioxide emissions worldwide in 2021, by sector



Source: <https://www.statista.com/statistics/1129656/global-share-of-co2-emissions-from-fossil-fuel-and-cement/>



## 02 Project Objective & Outputs



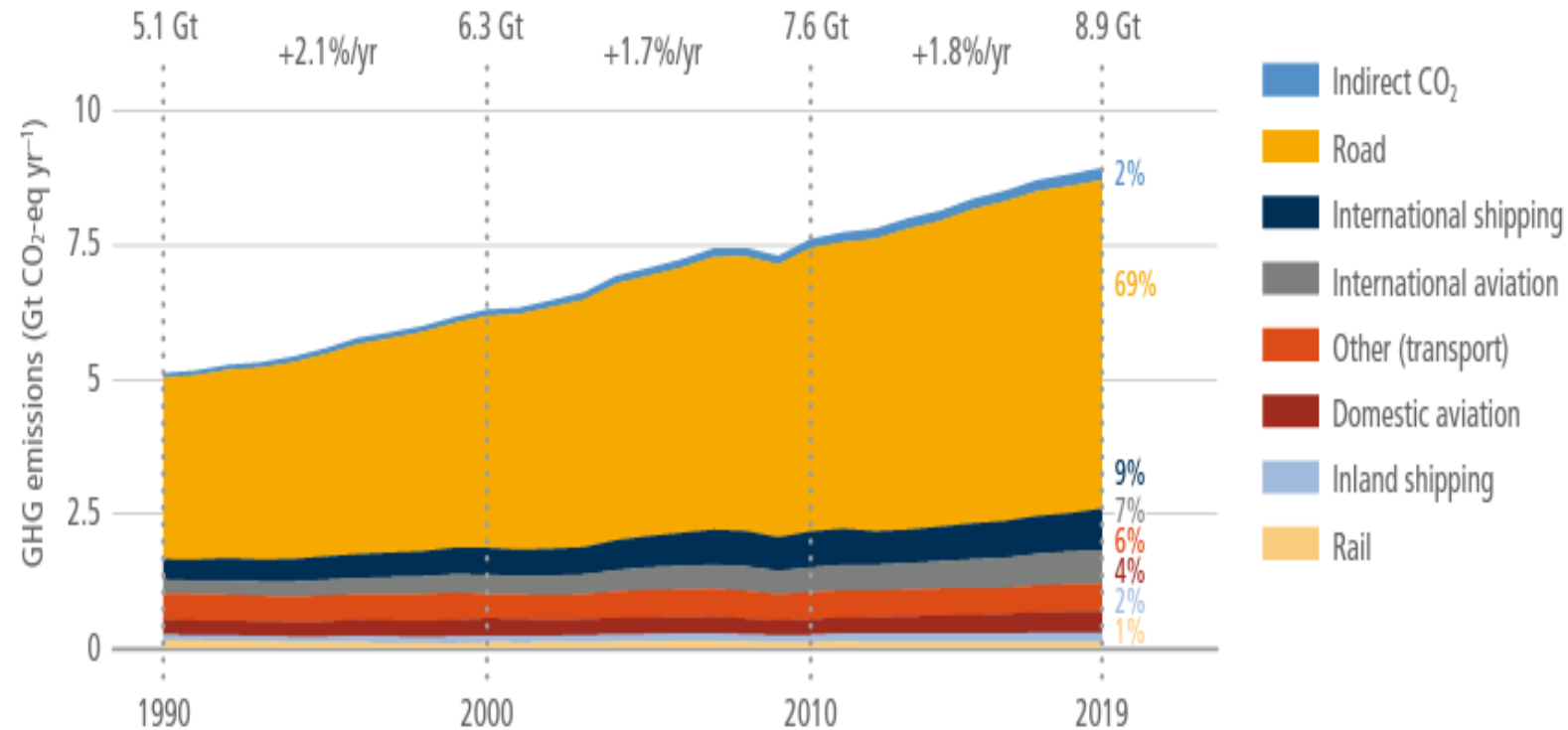
# The Necessity of The Project

- The countries of the world commit to the Net Zero Goal in line with the Paris Agreement and the Sustainable Development Goals by the United Nations,

- The Net Zero Scenario calls for the transportation sector's emissions to decrease by nearly 20% to less than 6 Gt by 2030.

- Achieving this reduction would depend on the quick electrification of road vehicles, operational and technical energy efficiency measures, the commercialization and scale-up of low-carbon fuels, especially in the maritime and aviation sub-sectors, and policies that promote modal shift to less carbon-intensive travel options.

Global GHG emissions trends of transport sector



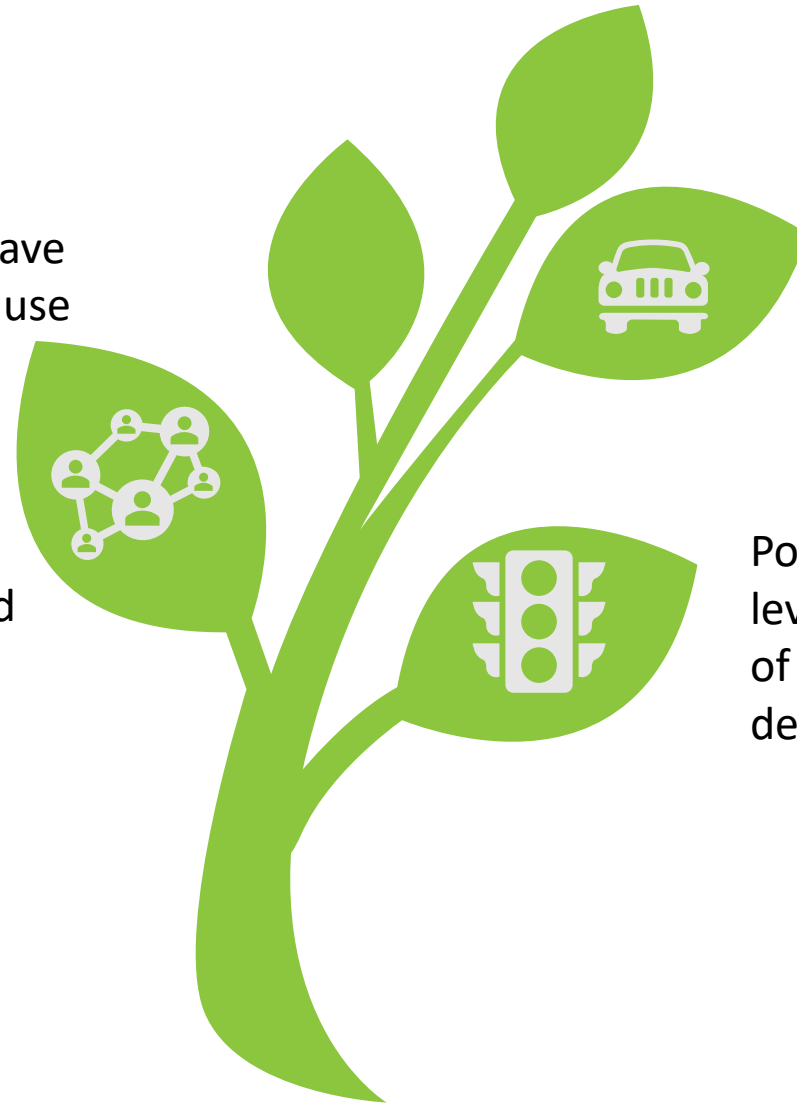
# The Framework of The Project

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## Transportation Systems and the Environment

**Centralized Networks** have localized emissions and use energy efficiently.

**Diffused Networks** have diffused emissions and consumes high energy.

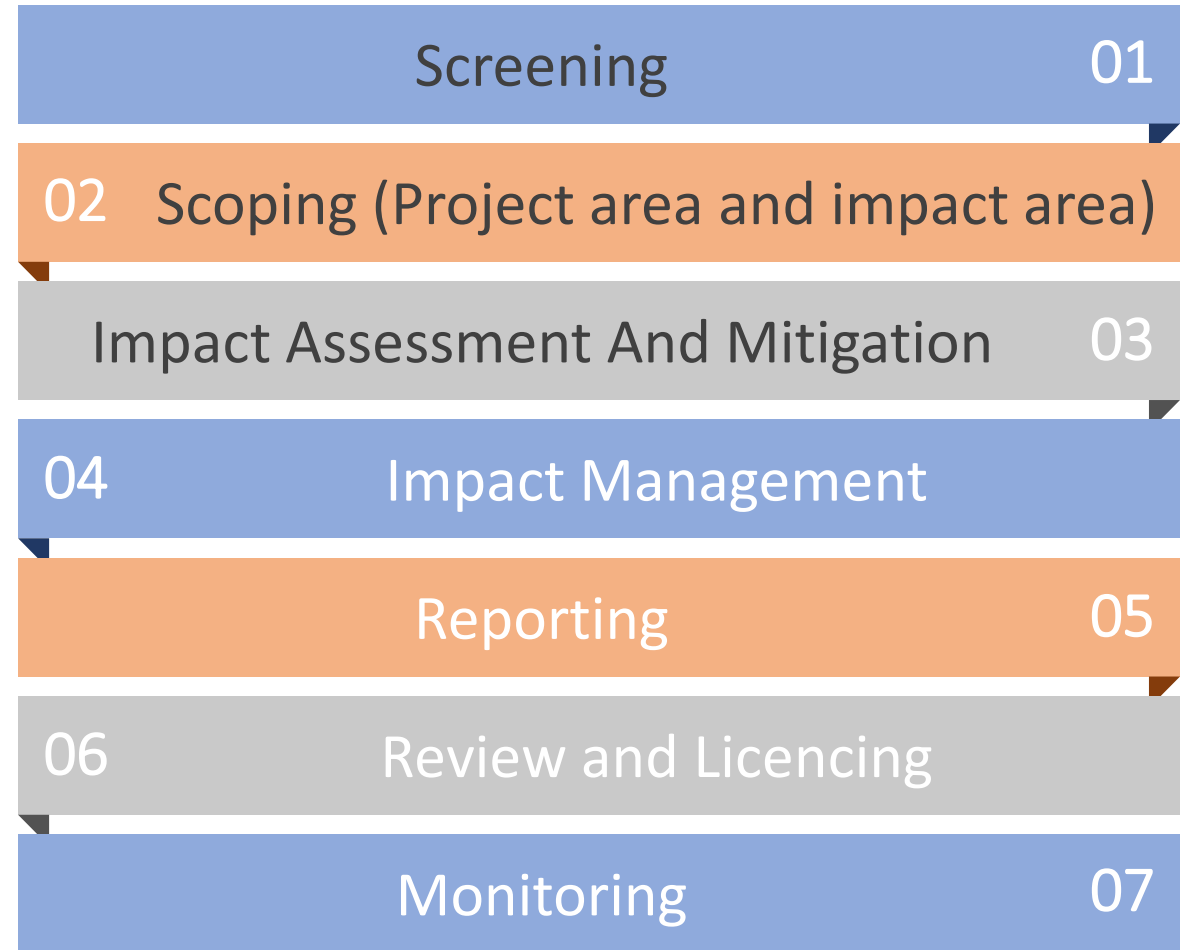
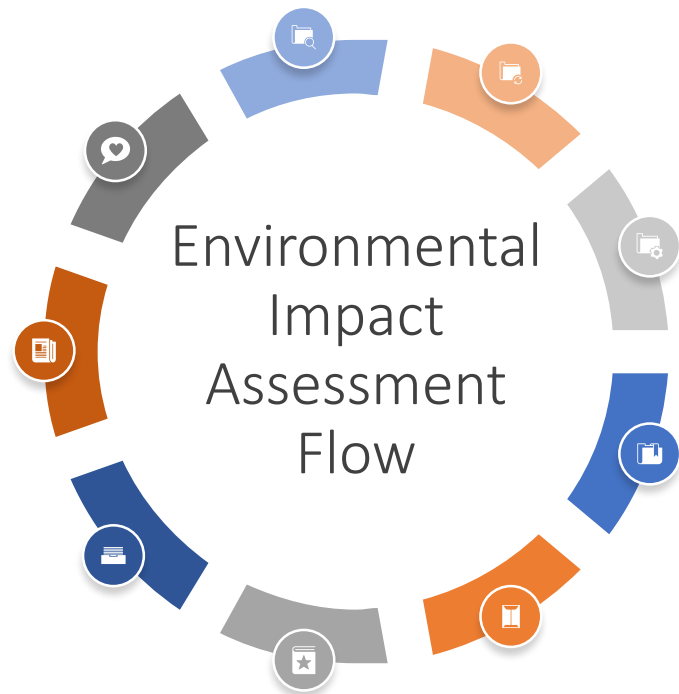


Nature of emissions and nature of energy consumption change due to **mode of transport**.

Point source of emissions, level of emissions and level of energy consumption depend on **traffic** conditions.

# General Flow for Environmental Impact Assessment

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# The Importance of The Project

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## Project Objective:

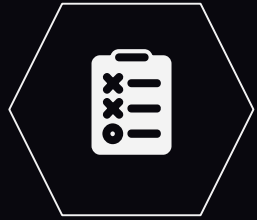
- To develop a guideline for measuring the environmental impacts of transport infrastructure in OIC member countries
- To identify areas where OIC countries are adopting best practices and areas where they may be falling behind
- To promote sustainable transport infrastructure development in OIC member countries through evidence-based decision-making

## Project Outputs:

- A comprehensive report on the environmental impacts of transport infrastructure in OIC member countries
- A guideline for measuring the environmental impacts of transport infrastructure in OIC member countries
- Recommendations for improving the sustainability of transport infrastructure development in OIC member countries

## The Aim of The Guidebook:

- OIC members can exchange and disseminate information to promote best practices
- OIC members can compare their different initiatives
- OIC members can identify barriers and opportunities to measure the environmental impacts of infrastructures while respecting national and regional contexts



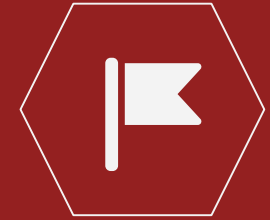
## Benchmark Studies & Comprehensive Report

To identify areas where OIC member countries are adopting best practices and areas where they may be falling behind



## Guideline for OIC Members

To develop a guideline for measuring the environmental impacts of transport infrastructure in OIC member countries



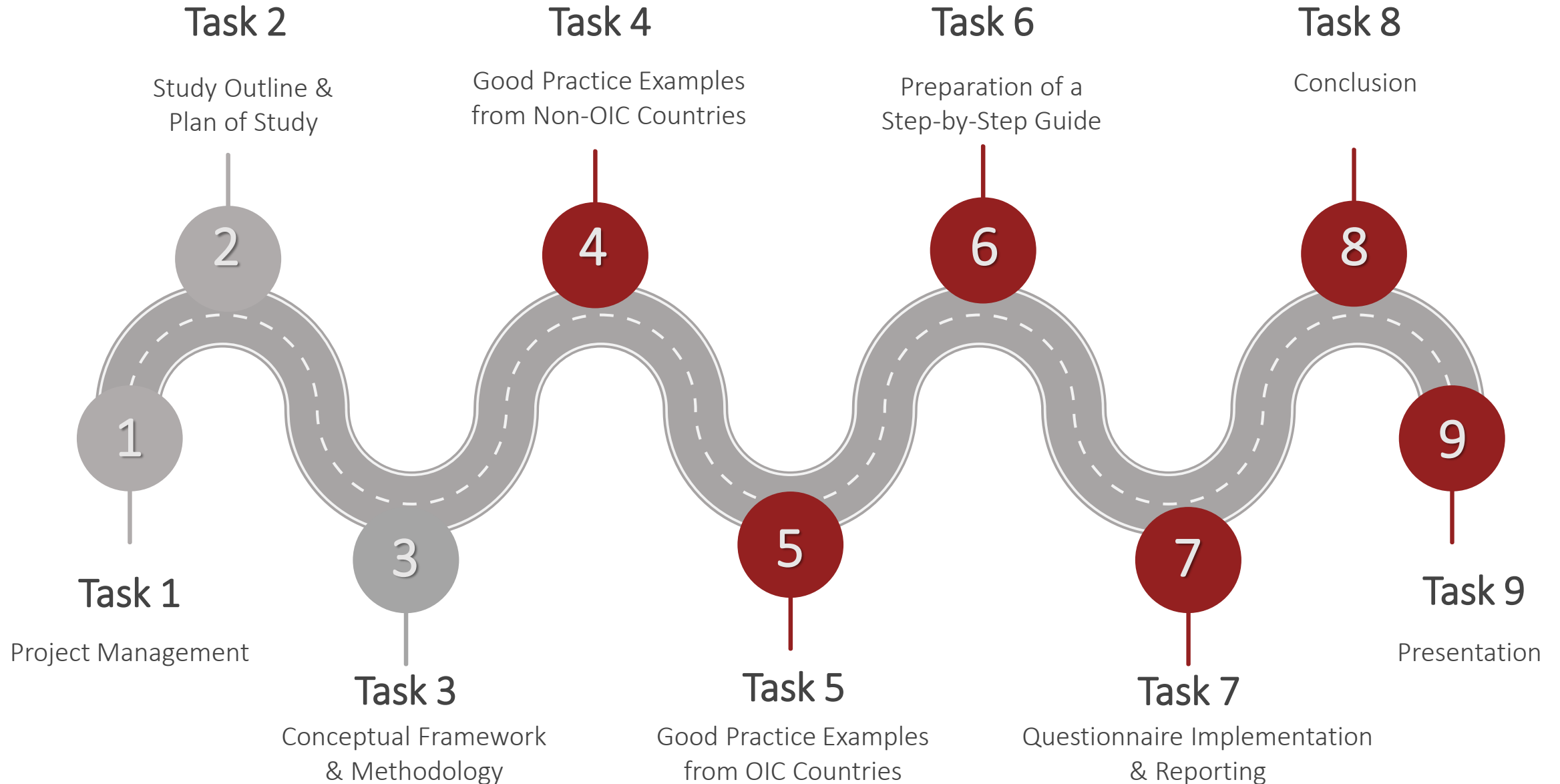
## Sustainability

To promote sustainable transport infrastructure development in OIC member countries through evidence-based decision-making



# 03 Project Components

# Project Components



# Good Practices from Non-OIC & OIC



## From Non-OIC:

-  The United States
-  The United Kingdom
-  Singapore

## From OIC:

-  Malaysia
-  Jordan

“Malaysia Stocktaking Report on Sustainable Transport and Climate Change”

“Jordan Green Growth National Action Plans 2021-2025: Transport sector”

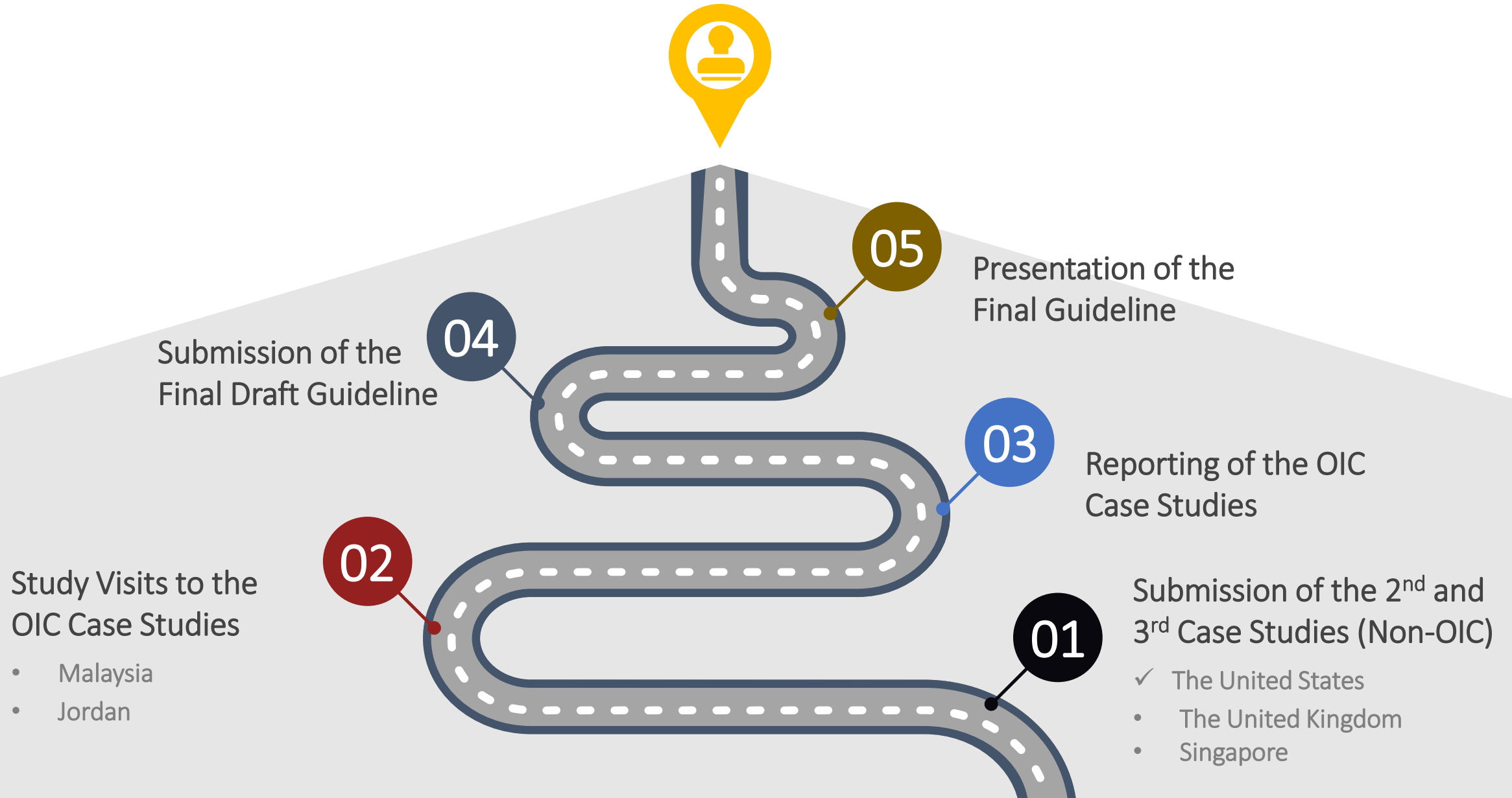




**04**

**Upcoming Submissions  
& Events**

# Upcoming Submissions & Events





# Thank You.

Do you have any questions?

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