

# Humanitarian Innovation Hackathon



9 INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



**THE GLOBAL GOALS**  
For Sustainable Development

## Hackathon Challenge C

Rising sea-level and coastal flooding resilient  
transportation infrastructure

### Overview

Transportation infrastructure is vulnerable to damage due to rising sea-levels that results in increased storm surges and coastal flooding events. Good transportation infrastructure is critical for economic productivity via movement of people and goods. Roads in coastal areas of less-developed Asia-Pacific countries are vulnerable to damage due to these factors:

- Poor design with the roads being located too close to the coastline.
- Insufficient sub-surface compaction prior to pavement laying (contributes to lack of stability).
- Sub-standard pavement construction (leads to failure).
- Lack of drainage (e.g. culverts are absent or too small).
- Bridges were not designed for increasing flood levels and are frequently damaged.

Investing in road transportation is critical to provide all season road access and increasing community resilience to climate change impacts. Innovative solutions are needed for road construction that draw on recycled materials and new construction techniques.

## Challenge Task

Design innovative strategies for improving the resilience of coastal road networks in Asia-Pacific countries so that they provide all-season road access.

## SDG targets

- Contributes to SDG 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation<sup>6</sup>.
- Target 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

<sup>6</sup> United Nations, 2023. SDG 9. Industry Innovation and Infrastructure. <https://sdgs.un.org/goals/goal9>



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