

Paris Session 2022



Comparison of CO₂ emissions from vehicles and helicopters
used to transport materials of OHL towers

B2_PS3_Q3.11

During installation or maintenance, is there a difference in environmental
impacts (displacements) depending on whether vehicles or helicopters are
used - (what is the threshold?)

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Comparison of CO₂ emissions from vehicles and helicopters used to transport materials of OHL towers.

- *Case 1 : Installation of towers in forested areas*
- *Case 2 : Installation of towers on flat land with no trees*
- Evaluation conditions for CO₂ emissions
 - 21 steel towers, 30 tons/tower, OHL length 9km
 - When vehicles are used in forested areas, the forest should be logged, and temporary roads are constructed in proportion to the rate at which vehicles and helicopters are used.
 - Temporary road width: 7 m.
 - Transportation distance from the materials storage yard to each site: 10 km
 - Vehicle load: 10 tons/way, Helicopter load: 3 tons/way
 - CO₂ emissions are evaluated for the transport of steel towers only.
 - CO₂ emissions related to manufacturing, transportation from manufacturers to the material yard, construction, maintenance, and removal are not evaluated.



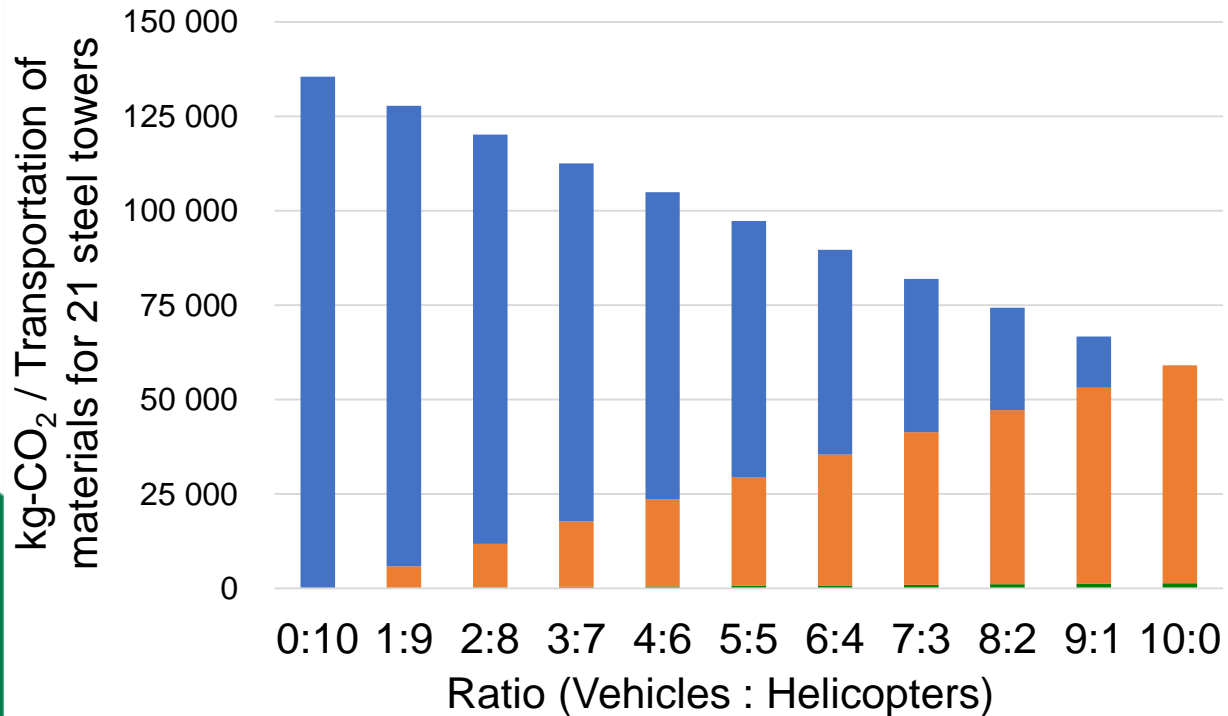
Case 1



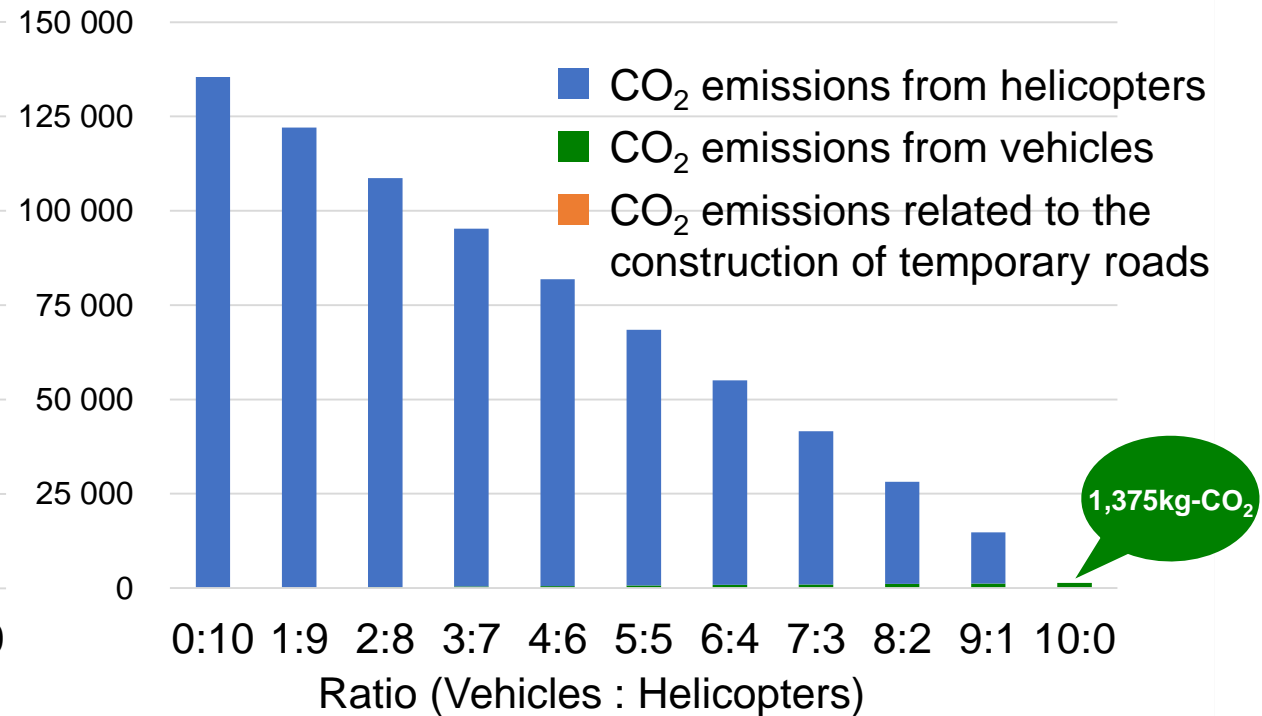
Case 2

- Without considering CO₂ absorption by forests

Case 1 : Forested areas



Case 2 : Flat land with no trees

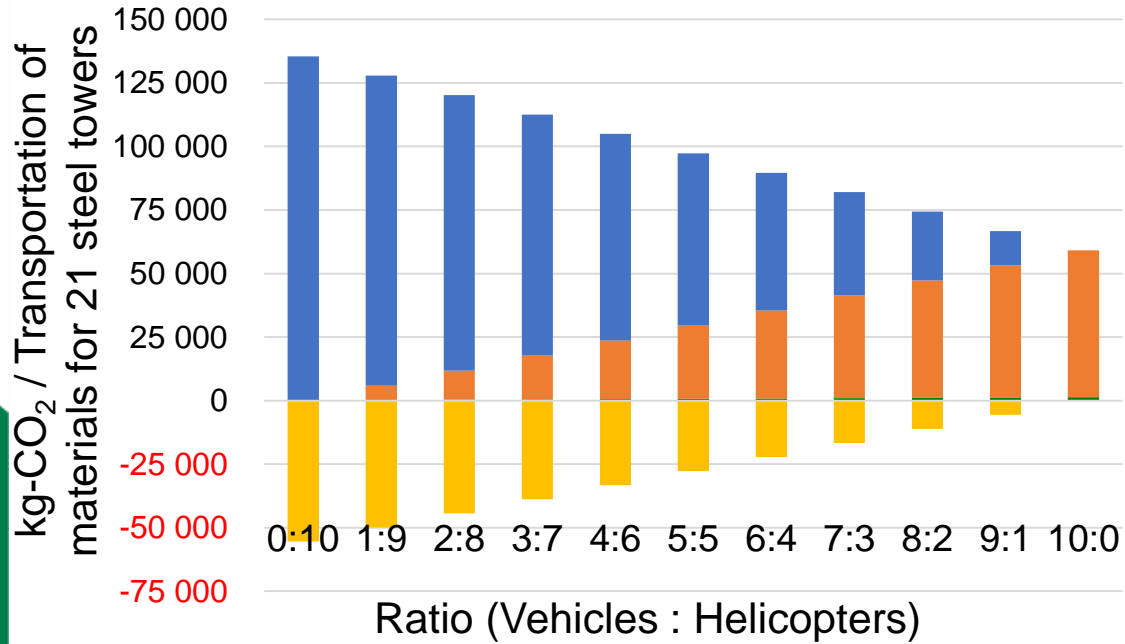


- Even if forests were logged and temporary roads were built, transporting steel tower materials by vehicles resulted in lower CO₂ emissions.
- It should be noted that only the transport of steel towers was evaluated. Temporary roads can also be used to transport workers and construction equipment.

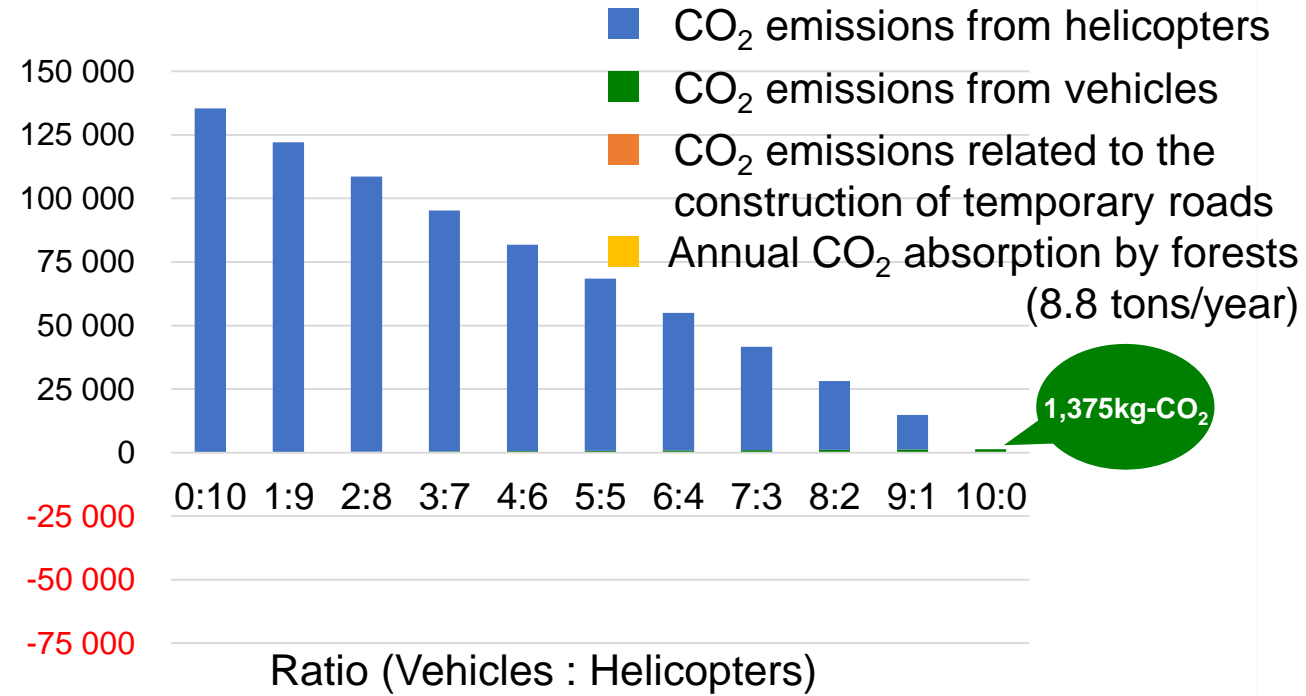
Group Discussion Meeting

- Considering CO₂ absorption by forests

Case 1 : Forested areas



Case 2 : Flat land with no trees



- Some vehicle and helicopter usage patterns can offset CO₂ emissions over several years by reducing the logging trees area.
- Transportation methods with low CO₂ emissions depend on the installation area and other factors.

Group Discussion Meeting