EXECUTIVE SUMMARY

Since fiscal year 2012, there has been some success in identifying investment options to reduce traffic congestion, and thus to reduce the demand for oil. However, it has also become clear that the proposed investment and policy measures have limited effects and some fundamental change is therefore required to attain a better future in the case of existing megacities such as Jakarta. From the initial development stage, appropriate measures must be implemented gradually to allow these cities to develop.

Meanwhile, the East Asia Summit region has many mid- to small-sized cities that are about to launch—or have just launched—a rapid urbanisation and motorisation. This paper thus decided to deal with mid- to small-sized cities in their initial development stage, taking Da Nang of Viet Nam as the subject of a case study, and analysing policy and infrastructure measures for preventing future traffic problem in advance, thus avoiding excessive use of energy in the future.

Possible Improvement in Infrastructure

Da Nang City in Viet Nam plans to develop a bus rapid transit (BRT) system in the near future but does not have any blueprint for the necessary feeder line bus system that enables the BRT to perform better and, accordingly, to avoid traffic problems and excessive demand for oil. Therefore, this feeder line bus system issue will be tackled in this study.

Meanwhile, the basic development of the method of specifying the feeder network and its headways' optimal route was completed, and preliminary analysis was carried out. The following findings were obtained:

- The addition of a feeder network increases the public transport's use rate although the rate reaches a plateau after a certain investment level.
- In the results of feeder network optimisation, routes with many origins and destinations are preferentially selected.
- The public transport selection rate near BRT stations is higher than that of those near the stations of feeder networks (in this study, the former has 28.5 percent; the latter, 8.0 percent).

Meanwhile, some points diverted from reality due to insufficient modelling. In

particular, the function can be improved to better reflect the actual choice behaviours regarding different transportation modes. As such, tweaking the model to reflect the local situations may be required in the next step.

Policy Recommendations

This study analysed how urban transport can be improved (and consequently improve the sector's energy-use efficiency) by promoting a shift in transport mode when a mass rapid transit system is introduced. The study investigated various precedent actions and relevant policies throughout the world. Findings indicate that many localities experienced significant economic loss and difficulties in addressing the problem due to policies not able to catch up with the rapid development of cities.

Thus, to prevent such deterioration in the traffic system, this study reviews the framework of problem awareness in urban transportation. After all, once appropriate preventive measures are in place and functioning properly, economic losses and recurring traffic problems could be avoided. Meanwhile, due to the lack in precedents, this study has anticipated that some cities may have difficulty in formulating proactive measures. Thus, its policy recommendations pertain to these four steps on how to formulate effective preventive measures:

- Identify and share the concerns around potential traffic problems.
- Present measures on the transport sector as part of urban planning.
- Secure financial resources and formulate a sustainable policy mix.
- Share values and collaboration with citizens and companies.