South-East Asia is one of the fastest growing economies in the world, with a population of more than 600 million. In 2019, the GDP was more than $3 trillion representing 6¼ per cent of global GDP. The rate of urbanization is projected to rise from 42 per cent in 2010 to 49 per cent by 2025. Without change this will lead to even greater traffic congestion, safety issues and urban inequality.

Further, the transport sector in South-East Asia consumes more than 25 per cent of the total region’s energy, which is directly related to an increase in emissions.

To address this problem and provide cost-effective mobility options in South-East Asia, the Asean Smart Cities Network is a concept that purposefully includes smart mobility and other smart transport systems as an integral part of its network.

IN 2015, 193 COUNTRIES CAME TOGETHER AND FORMALLY ADOPTED THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT WHICH CONSISTS OF 17 SUSTAINABLE DEVELOPMENT GOALS AND 169 INDICATORS. SEVERAL GOALS DIRECTLY LINK TO TRANSPORT, WHICH IS CRUCIAL FOR ECONOMIC AND SOCIAL WELLBEING. TARGET 3.6: HALVE THE NUMBER OF WORLDWIDE DEATHS AND INJURIES FROM TRAFFIC ACCIDENTS, TARGET 9.1: DEVELOP QUALITY, RELIABLE, SUSTAINABLE, AND RESILIENT INFRASTRUCTURE AND TARGET 11.2: ACCESS TO SAFE, CHEAP, ACCESSIBLE, AND SUSTAINABLE TRANSPORTATION SYSTEMS; ARE JUST A FEW OF THEM.

The way urban areas of South-East Asia can improve their traffic conditions with Smart Mobility

INCREASE THE USE OF SMART MOBILITY APPROACHES TO IMPROVE TRAFFIC CONDITIONS IN URBAN AREAS IN SOUTH-EAST ASIA

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ASEAN SMART CITIES NETWORK

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Ride-sharing, bike-sharing, demand-responsive transit, personal mobility, and Mobility-as-a-Service (MaaS) are all examples of smart mobility. Advantages are already found with initial efforts. Carpooling improves vehicle availability in hot spot areas during peak hours which can reduce travel distances of 2-3 km per trip on average (being 20-30 per cent of the average distance).

Concurrently the financial benefits accrued from carpooling could be redirected to other infrastructure projects. Ride-sharing has shown improvements in safety in terms of a reduction in driver-related crashes and driver-related offences by 1.2 and 1.9 times industry standards.

Travel externalities such as greenhouse gas emissions can also be reduced by ride-sharing with a smaller number of cars on the road. In China bike sharing has reduced car travel by 3 per cent across 50 cities resulting in a reduction of emissions equivalent to that 170,000 cars. In Shanghai alone, bike-sharing saved 8,358 tons of petrol and decreased CO₂ and NOx emissions by 25,240 and 64 tons respectively.

Demand-responsive transport can provide an affordable and convenient transport service for those with limited access to a private vehicle in areas of infrequent or inaccessible public transport.

National and subregional level policy recommendations include identifying and specifying the needs of smart mobility within the country, prioritizing smart mobility services, establishing national smart mobility plans and strategies, utilizing Big Data for smart mobility, developing subregional strategies, and cooperating and collaborating with neighboring countries, among others.

This will enable policymakers to make relevant policy and strategy changes that greatly enhance the efficiency of transport systems and their associated societal benefits to achieve the Sustainable Development Goals.

ESCAP CASE STUDIES

To assess the efficiency and equity of public transport in Bangkok, Hanoi, Jakarta and Singapore, two newly developed indices (Mobility Boost Power Index and Mobility Boost Equity Index) have been employed. The findings of the case studies have concluded smart mobility improves the accessibility, interconnectivity, reliability and convenience of mobility services in vulnerable areas in target cities.

CONCLUSION

WELCOMING THE ADVENT OF A NEW PARADIGM FOR SMART MOBILITY, WHILE BREAKING DOWN THE BARRIERS TO ITS DEVELOPMENT, CAN LEAD TO A COMPLETELY NEW GENERATION OF PREDICTIVE SEAMLESS MOBILITY THAT TAKES THE TRANSPORT EXPERIENCE OF TODAY TO THE NEXT LEVEL.

FOR MORE INFORMATION
www.unescap.org/our-work/transport
OR escap-td@un.org

FOR SOUTH-EAST ASIA TO EXPLORE THE SMART MOBILITY POTENTIAL, THE PUBLIC SECTOR, PRIVATE SECTOR AND ACADEMIA NEED TO COLLABORATE TO BRING SMART MOBILITY TO THE FOREFRONT OF SOUTH-EAST ASIA TRANSPORT STRATEGIES.

WELCOME TO THE ADVENT OF A NEW PARADIGM FOR SMART MOBILITY, WHILE BREAKING DOWN THE BARRIERS TO ITS DEVELOPMENT, CAN LEAD TO A COMPLETELY NEW GENERATION OF PREDICTIVE SEAMLESS MOBILITY THAT TAKES THE TRANSPORT EXPERIENCE OF TODAY TO THE NEXT LEVEL.