9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

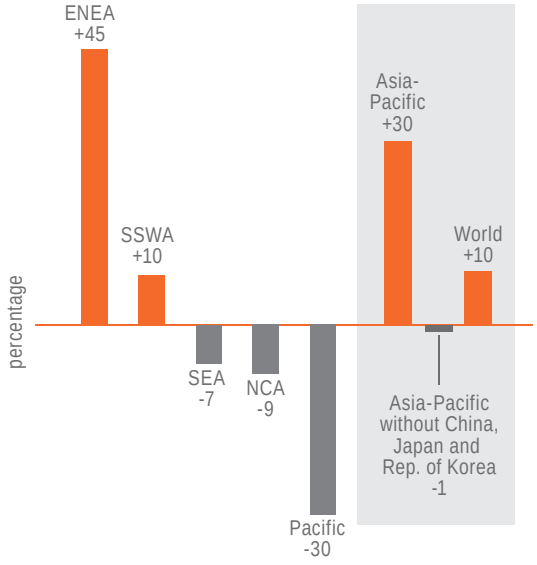
Goal Nine sets targets for three important aspects of sustainable development: infrastructure, industrialization and innovation. Highlights of the baseline status of the region are based on available data— on sustainable industrialization: manufacturing share of value added as share of GDP and CO_2 emission and on fostering innovation: research and development expenditure as a share of GDP. The analysis also highlights access to mobile networks as an indicator of infrastructure development.

Industrialization: Minus the rapid growth of the three largest economies in East Asia, regional growth in manufacturing value added as a proportion of GDP has been stagnant and below the world average

Between 2000 and 2015, manufacturing as a proportion of value added grew by 30% in the Asia-Pacific region compared with only 10% for the world as a whole. However, most of this was due to rapid growth in East and North-East Asia.

Excluding China, Japan and the Republic of Korea, the region's share of manufacturing value added in GDP was stagnant over this period, and was below the world average in 2015.

Change in manufacturing share of value added from 2000-2015, percentage

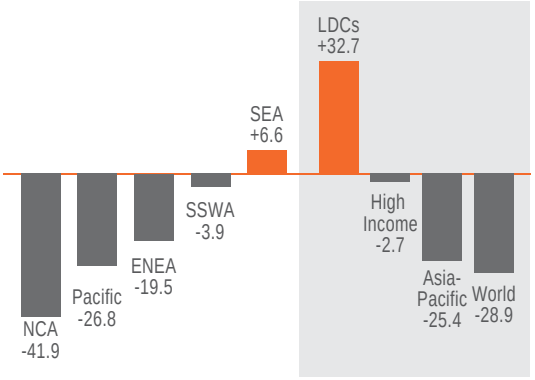


Infrastructure: Carbon dioxide emissions per unit of GDP declined by 25 per cent over the last two decades in the Asia-Pacific region but still remains higher than the world average

Carbon dioxide emissions in the region have fallen, but in 2013 still averaged 390 grams per unit of GDP, compared with the global average of 313 grams per unit.

North and Central Asia had the highest carbon dioxide intensity but also recorded the highest decline from 1990 levels. LDCs, on the other hand, as a result of rising industrialization, have substantially increased their emissions intensity.

Change in carbon dioxide Intensity between 1990 and 2013, unit of GDP (2011 PPP)



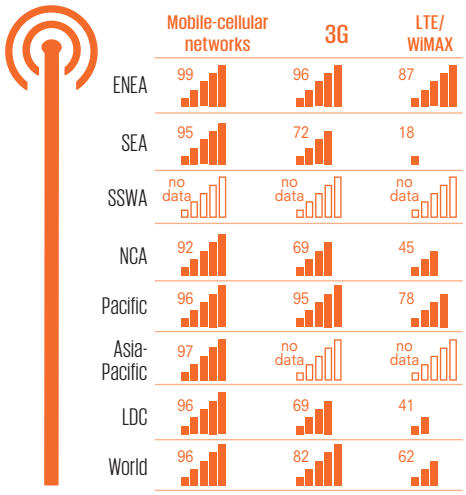
Infrastructure: The Asia-Pacific has disparities in mobile network coverage

Between 2001 and 2015, the proportion of the Asia-Pacific population covered by mobile-cellular networks grew from 43% to 97%.

Mobile phone coverage is generally high; lowest coverage is the 92 per cent for North and Central Asia.

However, coverage in terms of newer network technology (3G older, LTE newer) varies across subregions, with greater disparity in the newer technologies.

Population covered by a mobile-cellular network, 3G and higher, percentage of population in Asia and the Pacific and subregions and LDCs, 2015



Innovation: Low income economies in Asia-Pacific region invest very little in research and development

Investments in research and development spur innovation and the growth of sustainable industries.

In 2013, Asia-Pacific research and development (R&D) expenditures was 2 per cent of GDP; this was higher than the global ratio of 1.7 per cent. Upper Middle income economies doubled their R&D expenditure share from 0.8 per cent in 2000 to 1.6 per cent in 2013.

The share or R&D expenditure to total GDP of the high income economies in the Asia-Pacific region was twice that of upper middle income economies and six times more than that of lower and lower middle income economies.

Research and Development Expenditure as a share of GDP (%)