

9 **INDUSTRY, INNOVATION
AND INFRASTRUCTURE**



SDG 9 Summary

Number of Targets	Number of Indicators
8	12

Indicator Status	
Available	10
Unavailable	1
NA	1
Related to Organizations' Account	0
Total	12

SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Target (9.1): Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

9-1-1 Proportion of the rural population who live within 2 km of an all-season road

The indicator does not apply to Qatar since all municipalities of the country are urban.

9-1-2 Passenger and freight volumes, by mode of transport

Figure (9.1): Number of passengers by means of transport (in millions) (2016-2019)

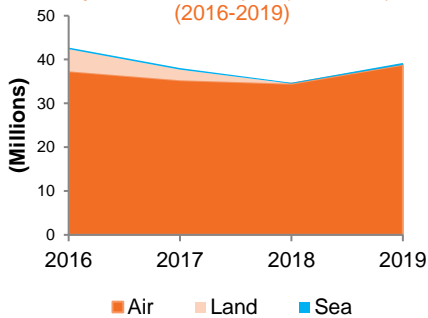


Figure (9.2): Quantity of goods by means of transport (million tons) (2016-2019)

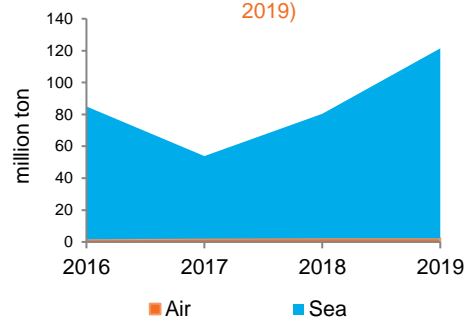


Table (9-1)

Number of passengers and freights, by mode of transport and direction (2016-2019)

Type	Mode of Transport	Direction	2016	2017	2018	2019
Passengers	Air	Arrivals	18,722,474	17,634,110	17,262,301	19,376,391
		Departures	18,600,369	17,644,492	17,233,727	19,427,655
		Total	37,322,843	35,278,602	34,496,028	38,804,046
	Sea	Arrivals	167,942	191,220	111,726	211,803
		Departures	166,765	188,329	110,279	212,175
		Total	334,707	379,549	222,005	423,978
Land	Arrivals	2,541,256	1,214,031	-	109	
	Departures	2,535,687	1,214,988	-	75	
	Total	5,076,943	2,429,019	-	184	

Table (9-1) **Number of passengers and freights, by mode of transport and direction (2016-2019)**

Type	Mode of Transport	Direction	2016	2017	2018	2019
Freights (Ton)	Air*	Inbound	854,703	1,139,831	1,218,364	1,217,844
		Outbound	792,272	881,112	979,946	997,961
		Total	1,646,975	2,020,943	2,198,310	2,215,805
	Sea	Inbound	83,249,729	51,855,337	78,076,983	119,231,487
		Outbound	-	-	-	-
		Total	83,249,729	51,855,337	78,076,983	119,231,487
	Land	Inbound	-	-	-	-
		Outbound	-	-	-	-
		Total	-	-	-	-

*Freights received by air include mail.

Source: PSA – Annual Statistical Abstract – Transport Chapter

Target (9-2): Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

9-2-1 Manufacturing value added as a proportion of GDP and per capita.

Figure (9.3): Manufacturing value added as a proportion of GDP and per capita (2016-2020)

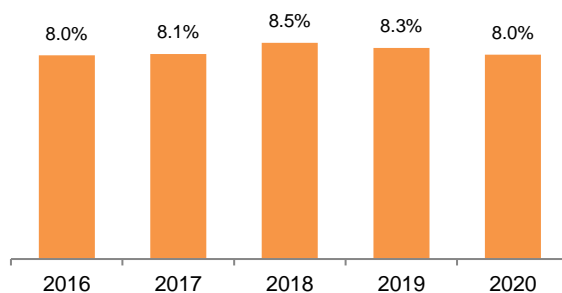


Table (9-2) **Manufacturing value added as a proportion of GDP and per capita (2016-2020)**

Sub-indicator	2016	2017	2018	2019	2020
(B) Manufacturing value added as a proportion of GDP (%)	8.0%	8.1%	8.5%	8.3%	8.0%

Source: PSA.

9-2-2 Manufacturing employment as a proportion of total employment.

Figure (9.4): Manufacturing employment as a proportion of total employment (2016-2021)

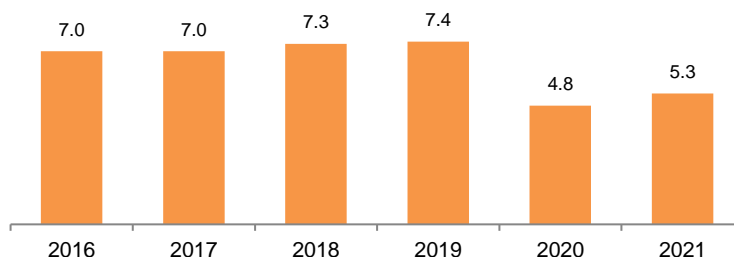


Table (9-3) Manufacturing employment as a proportion of total employment by sex (2016-2021)

Sex	2016	2017	2018	2019	2020	2021
Males	8.0	8.0	8.3	8.4	5.4	6.1
Females	0.8	0.8	0.8	0.8	0.5	0.5
Total	7.0	7.0	7.1	7.4	4.8	5.8

Source: PSA, Labour Force Sample Survey.

Target (9-3): Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets

9-3-1 Proportion of small-scale industries to total industry value added.

Table (9-4) Proportion of small-scale industries to total industry value added (2016-2021)

Indicator	2016	2017	2018	2019	2020	Goal by 2030
Small-scale industries value added (million QR.)	744	745	578	565	...	-
Total industry value added (million QR.)	46,814	47,189	54,972	53,501	41,586	-
Proportion of small-scale industries in total industry value added (%)	1.59	1.58	1.05	1.06	...	Increase

Source: PSA

9-3-2 Proportion of small-scale industries with a loan or line of credit.

Data are not available for this indicator.

Target (9.4): By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

9-4-1 CO₂ emission per unit of value added.

Table (9-5) CO₂ emission per unit of value added (2007)

Sub-indicator	2007
(a) CO ₂ emissions from fuel combustion (millions of tons)	46,507
(b) Total CO ₂ emissions from fuel combustion (millions of tons)*	52,924
(c) Total CO ₂ emission emissions per unit of GDP (kilograms per 2017 US dollar)	0.0009
(d) CO ₂ emissions per unit of GDP of economic activity (manufacturing excluding Manufacture of coke and refined petroleum products and repair and installation of machinery and equipment) (kilograms per 2015 US dollar)	0.0003

*: Includes productive and fugitive (diffuse) emissions

Note: Manufacturing: mining and manufacturing

Source: The Ministry of Environment and Climate Change; the first national communication report, and PSA calculations

Target (9-5): Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

9-5-1 Research and development expenditure as a proportion of GDP.

Figure (9.5): R&D expenditure as a proportion of GDP (2012-2021)

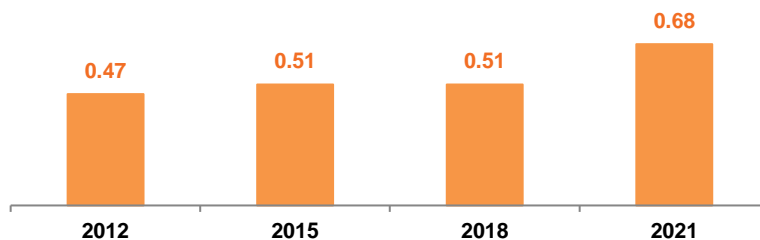


Table (9-6) Value of R&D expenditure by sector (2012-2021)

Indicator	Sector	2012	2015	2018	2021	Goal by 2030
R&D expenditure as a proportion of GDP (%)	Total	0.47%	0.51%	0.51%	0.68	Increase
	Higher Education	0.20%	0.36%	0.37%	0.44%	Increase
	Government	0.15%	0.07%	0.08%	0.15%	Increase
	Business	0.12%	0.09%	0.06%	0.09%	Increase
Value of R&D expenditure by sectors (QR)	Higher Education	1,362,982,966	2,131,418,165	2,551,413,006	2,897,853,042	Increase
	Government	1,050,651,854	396,820,614	563,312,131	978,355,826	Increase
	Business	841,201,364	526,298,056	430,799,120	576,285,614	Increase
	Total	3,254,836,184	3,054,536,835	3,545,524,257	4,452,494,482	Increase

Source: PSA, R&D Survey

9-5-2 Researchers (in full-time equivalent) per million inhabitants.

Figure (9.6): R&D personnel (in full-time equivalent) per million population (2012-2021)

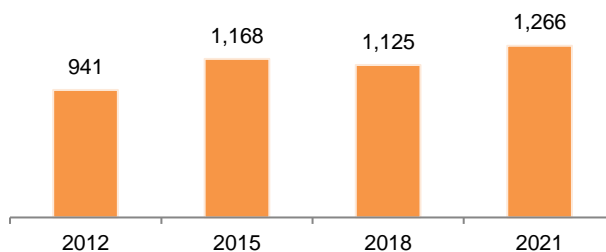


Table (9-7) Number of researchers and employees by sex and sector (2012-2021)

Indicator	Characteristics	2012	2015	2018	2021	Goal by 2030
Number of researchers by sex	Males	1,348	1,953	2,047	2,371	Increase
	Females	377	894	1,058	1,109	Increase
	Total	1,725	2,847	3,105	3,480	Increase
Number of researchers by sector	Higher Education Sector	809	1,845	2,399	2,191	Increase
	Government Sector	559	662	428	772	Increase
	Business Sector	357	340	278	517	Increase
	Total	1,725	2,847	3,105	3,480	Increase
Number of employees by sex	Males	2,236	2,825	3,016	3,717	Increase
	Females	802	1,895	2,095	1,911	Increase
	Total	3,038	4,720	5,111	5,628	Increase
Number of researchers (in full-time equivalent)	Higher Education Sector	855	1,963	2,299	2,302	Increase
	Government Sector	587	578	572	1,053	Increase
	Business Sector	510	476	465	672	Increase
	Postgraduate students in the higher education sector	108	324	479	602	Increase
	Total	1,952	3,017	3,336	4,027	Increase

Table (9-7) **Number of researchers and employees by sex and sector (2012-2021)**

Indicator	Characteristics	2012	2015	2018	2021	Goal by 2030
Total number of employees by sector	Higher Education Sector	1,583	3,209	3,838	2,878	Increase
	Government Sector	808	942	745	1,394	Increase
	Business Sector	647	569	528	1,356	Increase
	Postgraduate students in the higher education sector	206	328	479	602	Increase
	Total	3,038	4,720	5,111	5,628	Increase

Source: PSA, R&D Survey

Target (9.a): Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States

9.a.1 Total official international support (official development assistance plus other official flows) to infrastructure.

Table (9-8) Total international support (ODA plus other official flows) to infrastructure (2018)	
Unit	2018
QR	771,897,723
US\$	212,059,814

Source: Ministry of Foreign Affairs

Target (9-b): Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities

9.b.1 Proportion of medium and high-tech industry value added to total value added.

Figure(9.7): Proportion of medium and high-tech industry value added in total value added (2016-2020)

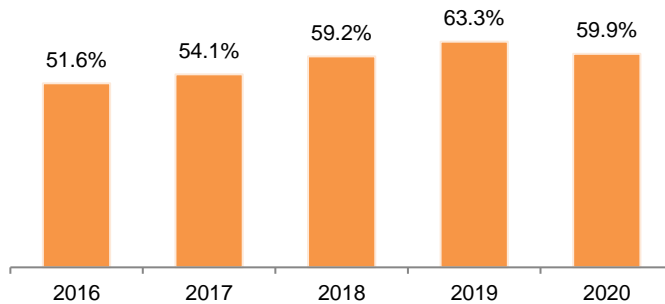


Table (9.9) Proportion of medium and high-tech industry value added to total value added (2016-2020)

Description	2016	2017	2018	2019	2020	Goal by 2030
Industry value added at current prices (million QR)	46,814	47,189	54,972	53,501	41,586	-
Medium and high-tech industry value added (million QR)	24,172	25,524	32,538	33,875	24,915	-
Proportion of medium and high-tech manufacturing value added in total value added (%)	51.6%	54.1%	59.2%	63.3%	59.9%	Increase

Source: PSA

Target (9-c): Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

9-c-1 Proportion of population covered by a mobile network, by technology

Figure(9.8): Proportion of population covered by a mobile network, by technology (2020 & 2021)

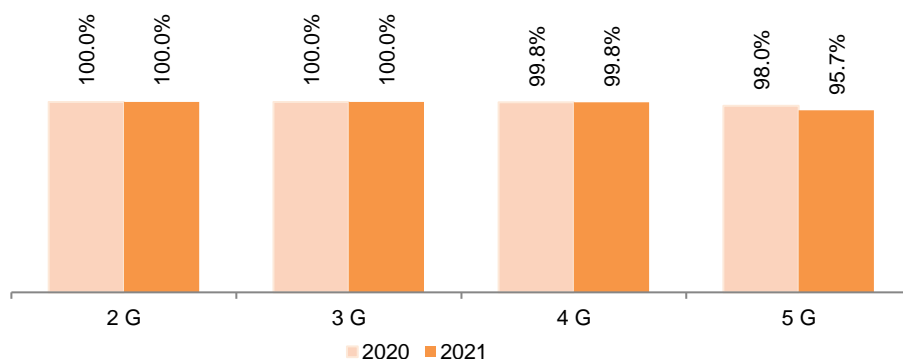


Table (9-10)

Proportion of population covered by a mobile network, by type of technology (2016-2021)

Sub-indicator	2016	2017	2018	2019	2020	2021	Goal by 2030
(a) Proportion of population covered by at least a 2G mobile network (%)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	Increase
(b) Proportion of population covered by at least a 3G mobile network (%)	99.6%	99.7%	100.0%	100.0%	100.0%	100.0%	Increase
(c) Proportion of population covered by at least a 4G mobile network (%)	99.0%	99.5%	99.5%	99.5%	99.8%	99.8%	Increase
(d) Proportion of population covered by at least a 5G mobile network (%)	49.6%	98.0%	95.7%	Increase

...: unavailable

Source: Ministry of Transport and Communications