

Assessment of Sustainable Development Goals in Saudi Arabia

Background Paper for KSA CCA, Draft Aljaz Kuncic, Maximiliano Sosa Andrés¹ February 2021

1. Background and Introduction

The present paper provides an overview of sustainable development in the Kingdom of Saudi Arabia (KSA), as captured by the Sustainable Development Goals (SDGs). The United Nations 2030 Agenda for Sustainable Development has as its biggest goal a series of transformative steps to shift countries towards a sustainable and resilient path. The 17 SDGs are part of the universal Agenda building on the Millennium Development Goals and aiming to complete those that were not achieved. This includes the strengthening of human rights, gender equality and the economic, social and environmental areas of each country. The 2030 Agenda is also based on five pillars: People, Planet, Prosperity, Peace and Partnership, which encompasses the 17 SDGs and attends to equality, justice and participation both internally and in cooperation with other countries around the world.

The KSA has implemented several policies to achieve the objectives established in the 2030 Agenda, most notably as established under the Vision 2030. The Vision has been built on the guidelines of the 2030 Agenda, adapted to the national reality of the Kingdom. KSA's Vision 2030 includes a series of objectives and programs that overlap with the UN Agenda under all five pillars and involve interlinkages between all SDGs. The Vision 2030 has identified 12 programs to achieve the Kingdom's goals and to position KSA as a welcoming economy for investors, workers and visitors.

The implementation of the Vision 2030 is ongoing and already shows progress in several indicators, yet by no means completed. Several bottlenecks remain, which pose challenges for the Kingdom. This document highlights those areas where the KSA is on path to achieve its goals and those where more profound interventions are required.

2. Data and Methodology

We rely on the data from a variety of local and global sources, using disaggregation's by vulnerable groups whenever available. For each SDG we provide key indicators to measure attainment of development objectives of the KSA up to the most recent available data. Whenever possible, we also provide historical trends to measure evolution through time

In each SDG we identify areas of strength where the KSA shows good progress and areas of weakness where there is room for improvement. Moreover, we also provide a characterization of the most vulnerable groups in each SDG, as identified by Kuncic (2021).

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3. Overview of SDGs

SDG 1: End poverty in all its forms everywhere

Most vulnerable groups: Women and girls, Children, Persons with Disabilities

In terms of social protection KSA offers an income guarantee program for low income households and people with disabilities, as well as the Citizen Account Programme, which compensates Saudi households on a monthly basis for higher living costs, such as energy prices and VAT². Over 12 million Saudi households take part in this program (which represents around 60% of the total Saudi population). However, the program does not include non-Saudi population, which could be a significant determinant of inequalities, given the large non-Saudi representation in KSA.

The maximum cut-off for eligibility to the Citizens Account Programme is SAR 18,511 (USD 4,932), implying a relatively generous program. For reference, the support for a family of six³ (four kids age 18 year or less and a wife) earning up to SAR 5,000 (USD 1,330) is SAR 980, which represents about 20% of their income. Still, there is little differentiation in benefits according to income. The current design can be improved to better address inequalities by further splitting benefits for lower income levels. In addition, KSA has reduced the number of beneficiaries by over 1 million to the program after an overhaul in April 2020, with changes in eligibility rules, upper limits for payouts and the suspension of new applications⁴. This change, coupled with the new tax increases in 2020 could significantly impact families as well as single beneficiaries, potentially broadening income inequalities.

Almost all households in KSA have access to basic services such as education, clean water, electricity, sewage and waste collection, and around 35% of government spending is dedicated to basic services including health and social protection⁵. It should be noted that access to the water network is limited, and more than half of the population has access through bottle water (see SDG 6). Overall, KSA is covering basic living needs for all households in the Kingdom. However, the continued absence of household income and wealth data limits the ability of and decision-makers to monitor the level of financial well-being in KSA. Current income statistics show a positive trend (monthly income of Saudi households of SAR 11,494 in 2018, compared to 10,723 in 2013). However, the picture is incomplete as we lack information for non-Saudi households (King Khalid Foundation, 2019).

SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Most vulnerable groups: Children, Internally Displaced Persons

Children are one of the most vulnerable groups in KSA, accounting for almost one third of human rights recommendations and observations made by the United Nations (Kuncic, 2021). One of the main markers of malnutrition is the percentage of children with stunting, which is largely irreversible and determines an increase in the likelihood of getting sick, performing less well in school and growing up with economic disadvantage⁶. In KSA, around 8% of children are defined as stunted, with a difference between boys and girls (9.7 vs. 6.4 in 2019)⁷. The markers improved over time, with 11.8% of boys and

² Source: Ministry of Labour and Social Development

³ The average size of a household in Saudi Arabia is 6.3 (Al-Khraiif et al. 2019)

⁴ Source: Bloomberg

⁵ Source: GaSTAT Saudi Arabia SDG report 2019

⁶ Children are defined as stunted if their height-for-age is more than two standard deviations below the WHO Child Growth Standards median (Source: WHO)

⁷ Source: Ministry of Health

9.4% of girls being stunted in 2016⁸. These statistics are much lower in comparative terms with the world average (21.3% as of 2019) but relatively similar to other countries in the region (Iraq 12.6%, Oman 11.4%, Iraq 12.6%)⁹. In addition, after a spike in the early 2010's, the percentage of people suffering from hunger in the Kingdom dropped to 4.8% and is now stable¹⁰.

Childhood obesity is also a long-term issue as it increases the risk of developing chronic illnesses such as diabetes and cardiovascular diseases, as well as mental health issues (Al-Jawaldeh and Megally, 2020). In KSA, 2.6% of children are obese (2018 values)¹¹ and it is fairly equal between boys and girls. Possible effective policies have included a “sin” tax on sugar beverages, which has reduced soft drink consumption¹². In more global terms, KSA has failed to reach several targets highlighted in the Global Nutrition Policy Review (2016-2017), such as reducing anemia in women, reducing low weight at birth and child wasting (4.3% average for 2019)¹³. However, strengthening the prevention against health threats is part of Vision 2030.

In terms of availability of healthy food options, the Kingdom is heavily reliant on imports of food, as only about 30% of food consumed is produced within borders. Furthermore, for some basic commodities like rice and sugar local production is non-existent (Table 1). This represents both a short and long-term sufficiency risk for KSA, as its food security depends on access to global food systems. Food security has also been identified as a priority by the Saudi Vision 2030, but the COVID-19 pandemic has shown how international economic disruptions and supply chain bottlenecks are a potential source of concern for the food security of the country. Furthermore, sustainability in production is another source of worry, as only less than 15% of all agricultural areas are used for productive and sustainable farming. This marker has not shown any improvements over the decade¹⁴.

Table 1: Level of self-sufficiency in food commodity in the KSA

| Strategic commodities | %Self sufficiency |
|---|-------------------|
| Commodities with low food self sufficiency | |
| Cereals (Total) | 17.1% |
| Wheat | 21.0% |
| Rice | 0% |
| Maize | 2.2% |
| Sugar/sugarcane | 0% |
| Potato | 61.9% |
| Dry Onion | 16.6% |
| Other commodities | |
| Dates | 107.7% |
| Vegetables other than potato, onion | 45.5% |
| Milk | 88.3% |
| Egg | 102.2% |
| Poultry meat | 33.3% |
| Other meat | 37.4% |

⁸ Spource: GaSTAT Saudi Arabia SDG report 2019, Ministry of Health

⁹ Source: UNICEF, World Bank

¹⁰ Source: United Nations Statistics Division, SDG Country Profile Saudi Arabia

¹¹ Source: GaSTAT Saudi Arabia SDG report 2019, Ministry of Health

¹² Source: <https://globalnutritionreport.org/resources/nutrition-profiles/asia/western-asia/saudi-arabia/>

¹³ Source: Ministry of Health, WHO Global Nutrition Policy Review

¹⁴ Source: GaSTAT Saudi Arabia SDG report 2019, Ministry of Environment, Water and Agriculture

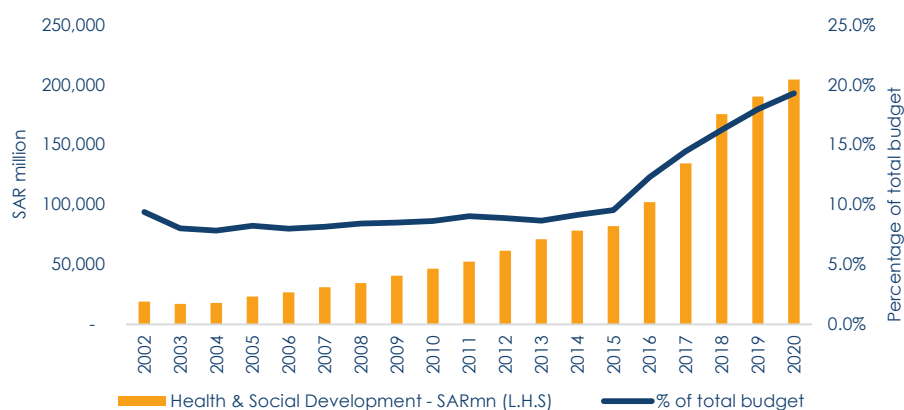
Source: General Statistics Authority, KSA, computed from FAO Food Balance Sheet: supply availability absorbed taken as consumption demand.

SDG 3: Ensure healthy lives and promote well-being for all at all ages

Most vulnerable groups: Women and girls, Children, Persons with Disabilities

KSA has heavily invested in the healthcare system through the build-up of quality infrastructure. The sector has been given top priority by the government as it has consistently been the top recipient of government expenditures (Figure 1)¹⁵. Government employees are ensured access to public healthcare. However, since the heavily unequal distribution of Saudi/Non-Saudi employees in the public sector (95%/5%) vs the private sector (22/78%), not all residents have access to health services¹⁶. Temporary Contractual Workers usually rely on private health insurance and around 10 million people are covered by this scheme. Although mandatory employment-based insurance was introduced in 1999 it has not fully been enforced, particularly for irregular migrants, domestic workers and low-skilled workers. Almost 78% of the non-Saudi population was enrolled in private insurance compared to 15% of Saudis¹⁷. However, several governorates have less than 70% of the non-Saudi population with private health insurance (Madinah, Qaseem and Najran). In 2020 there was also a decline in the number of privately insured employees. A possible reason is the reduction of non-Saudi employees in the labor force.

Figure 1: Healthcare spending as percentage of total expenditure



Source: Ministry of Finance and Ministry of Health

Moreover, although three quarters of the population are less than 5 km away from a health facility, the Kingdom has regional disparities in terms of access to hospital facilities, and there is no difference in distance-based access between Saudis and non-Saudis. For example, only 51% of Hail’s population is close to a health facility compared to 84% of the Eastern Region population¹⁸. There are also discrepancies in the distribution of beds and hospitals around the Kingdom that serve different amounts of population. For example, Riyadh, while being one of the most populated governorates has only 226 beds and 1.3 hospitals, being less equipped compared to the Northern Borders, which is one of the least

¹⁵ Source: World Bank

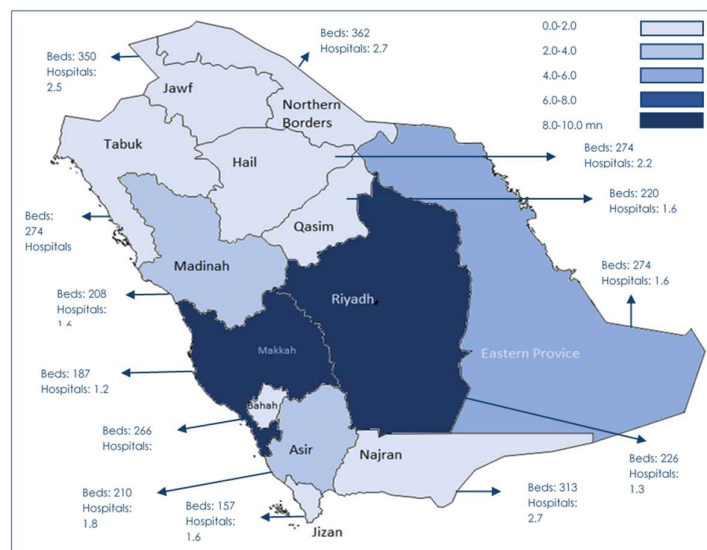
¹⁶ Source: Labor Market Survey Q22020

¹⁷ Source: Household Health Survey 2018

¹⁸ Source: Household Health Survey 2019

populated but has 362 beds and 2.7 hospitals per 100,000 people (Figure 2)¹⁹. There is still room to improve healthcare facilities in more populous provinces like Riyadh and Makkah given the increased urbanization and higher foreign worker population increase over the years.

Figure 2: Population heat map with distribution of healthcare facilities (Per 100,000 people)



Source: Ministry of Health, GaStat

Advances in health provision in KSA can be first seen in typical standardized measures. There is a relatively low under 5 (children) mortality rate (per thousand live births, KSA 8.5 in 2018 vs. Kuwait 7.9, Oman 11.4 and MENA 21.9). In addition, infant (under 12 months old) mortality has also significantly declined over time (18.9 in 2000 vs. 6.0 in 2018)²⁰. There is a gender difference however, with boys having a higher mortality rate than girls (under 5 mortality for boys is 9.3 and girls 7.3)²¹. The difference in mortality is also significantly large for non-Saudis (under 5 mortality for boys is 14.8 and girls 6.3), showing disparities in health provision for children around the Kingdom. The trend in mortality is coupled with preventive care measures such as high vaccination rates. Vaccination rates for children encompass 94% of children in most regions up to 100% (79.8% for Saudi children in Al-Qaseem)²². Near complete vaccination rates for both Saudi and non-Saudi children ensure increased protection against common transmittable illnesses and reduce the potential health costs from treating these diseases during early childhood.

Advances in maternal health have also been made in the last years. The maternal mortality rate has halved in almost 20 years (24 deaths per 100 thousand live births vs. 11.9), is currently is lower than in the MENA region (57 per 100 thousand live births)²³ and is in the same range as other high income Middle Eastern Countries (Kuwait 12; Oman 19)²⁴. In addition, almost one third of married women in KSA use modern methods for family planning. This figure, however, hides disparities in terms of region and less striking among age groups (Table 2). Including all women of reproductive age (15-49), 61% and

¹⁹ Source: GaSTAT Saudi Arabia SDG report 2019, Ministry of Health

²⁰ Source: World Bank, WHO

²¹ Source: Household Health Survey 2018

²² Source: Household Health Survey 2018

²³ Source: WHO, Family Health Survey 2019

²⁴ Source: WHO

59% of Saudi and non-Saudi women use modern methods of family planning²⁵. Nonetheless, the figure is improving, as the 2017 survey shows that 54% of women aged 15-49 reported access to planning.

Table 2: Prevalence of Modern Methods used in Family Planning among Women (15-49 years) who Are Currently Married by Governorates

| Governorate | Total |
|------------------|-------------|
| Al-Riyadh | 39.7 |
| Makkah | 34.6 |
| Al-Mokarramah | 19.9 |
| Al-Madinah | 19.9 |
| Al-Monawarah | 19.9 |
| Al-Qaseem | 33.9 |
| Eastern Region | 34.2 |
| Aseer | 25.0 |
| Tabouk | 16.0 |
| Hail | 29.9 |
| Northern Borders | 23.1 |
| Jazan | 35.9 |
| Najran | 21.4 |
| Al-Baha | 24.6 |
| Al-Jouf | 16.9 |
| Total | 32.9 |

Source: Household Health Survey 2018

There have also been advances in overall health. In terms of infectious diseases, HIV prevalence is extremely low (0.033 in 1000 people compared with a World average of 4.8 in 1000)²⁶, as well as tuberculosis (10.1 in 100 thousand versus a World average of 128)²⁷. Life expectancy at birth reached 75.2 years in 2020 and is expected to reach 78.4 (men) and 81.3 (women) by 2050. Moreover, the 40 to 60-year cohort will increase 1.5 times while the population over 60 will threefold and reach 14% of the total. Therefore, the demand for healthcare services due to chronic diseases is expected to increase given the aging process of the population. By 2025 already 73% of all deaths in the Kingdom will be related to chronic diseases. According to WHO, demand for highly specialized medical and surgical care is expected to increase (Rahman, 2020).

SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Most vulnerable groups: Women and girls, Children, Persons with Disabilities

The education sector is predominantly run by the government, with public schools representing 85% of the total. Total expenditure in education has remained relatively stable over the last five years (Table 3). However, as a percentage of total budget expenditures the figure had declined continuously until 2019, with mild recovery in 2020. Still, the ratio as a percentage of GDP is still well above UNESCO recommendations of 6% of GDP. Saudi population enrolment in primary school is almost universal, reaching above 98%. While figures for the non-Saudi population are not available, overall enrolment

²⁵ Source: Household Health Survey 2018

²⁶ Source: SDG report 2018, hiv.gov

²⁷ Source: WHO

rates in primary education for the country are 94.5%. This is evidence that enrolment for non-Saudis is slightly lower. Although it is not mandatory, pre-primary (5 years and under) enrolment rates hover around 20%, with slightly higher rates for non-Saudi (25%)²⁸. However, there are striking enrolment disparities depending on the region: 7% of children under 5 are enrolled in Aseer versus 26.5% in Makkah (Table 4).

Table 3: Public expenditure in education (Government budget)

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|--------------------|---------|---------|---------|---------|---------|
| Expenditure in SAR | 207,145 | 200,329 | 192,361 | 192,622 | 193,168 |
| as % of Budget | 24.7% | 22.5% | 19.7% | 17.4% | 18.9% |
| as % of GDP | 8.6% | 7.8% | 6.5% | 6.5% | 7.6% |

Source: SAMA Annual Statistics bulletin

Quality outcomes do not match the budgetary efforts, as reflected by underwhelming results in the PISA (Programme for International Student Assessment) scores. When compared to OECD averages, KSA performs significantly worse in math, reading and science (average of 489 points for the OECD vs. less than 400 for KSA in each category). When comparing performance by gender, girls outperform boys across education grades. For example, in sixth grade 67% of girls perform equal or above the national minimum standard competence for math, while only 52% of boys achieve the same.

Quantity outcomes do match the budgetary efforts: there is a clear pattern where older cohorts are more illiterate than younger cohorts, reflecting the general improvements in the educational system over time. However, there are also clear disparities in literacy by gender, with women being more illiterate than male, especially in older cohorts (Table 5), which also reflects the reduction in gender disparities in education programs over time, ranging from preliminary to tertiary education.

Table 4: Gross Enrolment ratio in Pre-primary school

| Governorate | Total |
|-------------------------|-------------|
| Al-Riyadh | 19.9 |
| Makkah Al-Mokarramah | 26.5 |
| Al-Madinah Al-Monawarah | 14 |
| Al-Qaseem | 12.8 |
| Eastern Region | 23.3 |
| Aseer | 6.8 |
| Tabouk | 14.6 |
| Hail | 13.5 |
| Northern Borders | 11.6 |
| Jazan | 14.4 |
| Najran | 11.1 |
| Al-Baha | 23.3 |
| Al-Jouf | 7.9 |
| Total | 32.9 |

Source: Education and Training Survey 2017.

²⁸ Source: Education and Training Survey 2017

In terms of more complex skills, younger adults (25-15 years old) have moderate ICT competencies, with three quarters of this group being able to master simple tasks like copying or moving a file or being able to send an email with an attachment (50%). More complex tasks have lower rates of attainment, including using formulas in data tables (20%), installing software (17%) or creating presentations (25%)²⁹.

The shortage of skills for the Kingdom is related to technical roles such as engineers, architects, IT specialists, and healthcare practitioners, which are a direct reflection of the Kingdom’s emphasis on the development of infrastructure. As a result, the Kingdom has implemented new eligibility requirements on its scholarship programs for young Saudis who want to study for university degrees abroad.

Table 5: Literacy rates by cohort and gender

| Age groups | Total | Male | Female |
|--------------|-------------|-------------|-------------|
| 10 – 14 | 0.4% | 0.4% | 0.5% |
| 15 – 19 | 0.6% | 0.5% | 0.7% |
| 20 -24 | 0.3% | 0.3% | 0.4% |
| 25 – 29 | 0.4% | 0.2% | 0.5% |
| 30 – 34 | 0.6% | 0.4% | 0.9% |
| 35 – 39 | 1.0% | 0.5% | 1.5% |
| 40- 44 | 2.0% | 0.3% | 3.8% |
| 54 – 49 | 4.9% | 1.2% | 8.8% |
| 50 – 54 | 10.7% | 3.4% | 18.5% |
| 55 – 59 | 15.3% | 6.2% | 25.2% |
| 60 – 64 | 26.4% | 10.0% | 43.9% |
| 65+ | 41.3% | 26.3% | 55.7% |
| Total | 5.0% | 2.4% | 7.7% |

Source: Education and training survey 2017

SDG 5: Achieve gender equality and empower all women and girls

Most vulnerable groups: Women and girls, Children

Researchers have analyzed the extent of female participation in KSA society over five pillars: economy, social engagement, and political structure, education and health (Omair et al., 2020). The economic pillar can be easily measured through labor participation and shows significant gender gaps, although differences are decreasing (see SDG 8). The other pillars are less straightforward to measure.

Regarding the social pillar, 85% of Saudi women have social media affiliation and 97% of Saudi women belong to a social network of support in times of crisis. Still, only 26% of Saudi families are headed by women or partially supported financially by women (Omair et al., 2020). In terms of political participation big gaps remain, with 14% of candidates and only 1% of the 3,156 municipal seats belonging to women³⁰. In terms of senior positions at the government, only 14% are filled by women (Omair et al., 2020).

In education terms, the gaps are mostly eliminated as enrolment rates are comparable across genders. For example, at the University level 49.7% of enrolled students are female, and they outnumber male

²⁹ Source: GaStat - ICT access for households and individuals Survey

³⁰ Source: Ministry of Municipal and Rural Affairs

graduates by a 53/47 ratio³¹. Finally, regarding health access there are non-noticeable differences. In terms of periodic health examinations, 26% of females and 23% of males have access³². Moreover, overall mortality rates are smaller for women (2.2%) than males (2.5%).

In other aspects of economic and social life, only 4% of the businesses are recorded under females' names. Among the challenges faced by females to entrepreneurship are restricted access to financial funds, less support from the community, and control of the business by male partners who act as a bottleneck in terms of female success (Almutairi, 2020). The same trend can be seen for the case of women in middle and senior management positions or even on land ownership: only 3.3% of these positions are filled by Saudi women and 0.28% of females own agricultural lands in KSA³³.

In the last five years, the Kingdom passed a series of rulings to improve the rights of women. In 2017, the ban on women driving was lifted³⁴. Over 48 thousand Saudi women have been issued a driver's license since then. In 2019, the Kingdom allowed women to travel independently once they turn 21, obtaining a passport without the permission of male guardians, registering their children's births as well as both marriages and divorces³⁵. Authorities regulated equal pay between genders and the right to work without facing any kind of discrimination. Women were also allowed to join the Armed Forces³⁶ and do not need permission to study, get a job or get surgery. In 2020, KSA banned marriages under 18, regardless of gender. In addition, anyone between 15-18 needs to obtain permission from a court for marriage. Although child marriages sometimes include boys, these changes were mainly aimed at improving the rights of girls. Lastly, the Kingdom's laws and regulations guarantee full and equal access to sexual and reproductive health care, information and education on HIV and HPV to 75% of women and men aged 15 years and older³⁷. Still, women and girls continue to be one of the most vulnerable groups, with over a third of the human rights observations and recommendations made since 2008 (Kuncic, 2021, see Social Exclusion Analysis).

SDG 6: Ensure availability and sustainable management of water and sanitation for all

The basic needs figures presented in SDG 1 hide inequalities in terms of source of water consumption or sewage characteristics. Although access to basic services is nearly universal, about 22% of Saudi households do not have water pipelines and rely on water trucks or wells. Moreover, only 60% of the population is covered by the sewage network³⁸.

In addition, there are evident regional disparities in access to water and sewage in KSA. The governorates of Aseer and Najran are water stressed, with less than 50% of households accessing water through pipelines. There are also significant disparities in access to drinking water, with Jazan, the Northern Borders, Aseer, Najran and Al-Jouf having less than 10% of households being able to access drinking water through a public network and having to rely on water trucks, purifiers or bottled water (Table 6)³⁹. Sewage access is also very unequal throughout the country, with about three quarters of the population accessing in the highly urban Al-Riyadh and Eastern Regions, while in Baha, Najran and Jazan less than 20% of population has that access. These regions are predominantly deserts and, except Baha, are near the Yemen border, and are clearly lacking proper water infrastructure.

³¹ Source: Ministry of Education

³² Source: Household Health Survey 2018

³³ Source: GaSTAT Saudi Arabia SDG report 2019, Agricultural Holdings Survey

³⁴ Source: <https://www.bbc.co.uk/news/world-middle-east-41408195>

³⁵ Source: <https://www.bbc.co.uk/news/world-middle-east-49201019>

³⁶ Source: <https://www.bbc.com/news/world-middle-east-43197048>

³⁷ Source: United Nations Statistics Division, SDG Country Profile Saudi Arabia

³⁸ Source: Household Survey 2020

³⁹ Source: Housing Survey 2019

Table 6: Access to water supply and sewage system by governorate

| | Water Supply | | | Sewage | |
|-------------------------|--------------|-------|------|---------|-------|
| | Pipeline | Truck | Well | Network | Ditch |
| Al-Riyadh | 93% | 0% | 7% | 74% | 26% |
| Makkah Al-Mokarramah | 69% | 31% | 0% | 56% | 44% |
| Al-Madinah Al-Monawarah | 80% | 19% | 0% | 50% | 50% |
| Al-Qaseem | 85% | 15% | 0% | 61% | 39% |
| Eastern Region | 95% | 5% | 0% | 86% | 14% |
| Aseer | 33% | 67% | 0% | 43% | 57% |
| Tabouk | 77% | 23% | 0% | 56% | 44% |
| Hail | 64% | 36% | 0% | 47% | 53% |
| Northern Borders | 99% | 1% | 0% | 62% | 38% |
| Jazan | 74% | 23% | 3% | 10% | 90% |
| Najran | 46% | 52% | 1% | 21% | 79% |
| Al-Baha | 75% | 25% | 0% | 4% | 96% |
| Al-Jouf | 95% | 5% | 0% | 42% | 58% |

Source: Household environment survey 2019

The Kingdom also faces challenges from climate change. A 2020 study shows decreasing trends in rainfall of about 0,59 mm per year over the last 40 years (Almazroui, 2020), representing a 1% of total rainfall. This would be reflected in an increase in droughts and an increase in the dependency on desalination plants. The country is already heavily dependent on desalinated water, amounting for 54% of the total water consumption⁴⁰. Increases in desalination will put pressure on the environment and marine resources in KSA (see SDG 14), and additional pressure is expected with the rapid depletion of freshwater resources. Latest available figures show that KSA is withdrawing fresh water at a rate of over 900% of the available freshwater resources⁴¹.

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all

Saudi Arabia faces an increasing demand for power like other countries in MENA, driven by population and industrial growth⁴². Fossil fuels are currently used to produce more than 80% of the total energy demands in KSA (Amran et al, 2020), which is a concern due to the large CO2 emissions associated with this industry (see SDG 13). The country has a large electric power generation expansion plan in the Middle East, with plans to increase generating capacity to 120 GW by 2032⁴³, representing an increase of about 56% in total capacity⁴⁴, including nuclear power capacity (Amran, 2020).

The overall electrical energy installed capacity has also increased in the last decade, reaching a peak of almost 81 thousand M.W in 2017⁴⁵ and being able to serve almost the totality of the population in the Kingdom. Almost 80% of electricity is used for air-conditioning purposes and over 40% of the total energy consumption is for residential purposes. In addition, electricity produced by desalination plants as a by-product of the process has increased by 60% in the period 2012-2018, reaching more than 40,000 GWh⁴⁶. Desalination requires a significant amount of energy, which in many places is currently provided by fossil fuels (Robbins, 2019), with significant environmental impact.

⁴⁰ Source: Ministry of Environment, Water and Agriculture; SAMA Annual Statistics 2019

⁴¹ Source: United Nations SDG Country Profile, 2011

⁴² Source: EIA

⁴³ Source: Vision 2030

⁴⁴ Source: GaStat

⁴⁵ Source: Indicators of renewable energy 2018

⁴⁶ Source: Indicators of renewable energy 2018

Most households have access to electricity services (with minimal differences between regions ranging from 99% to 100% of coverage) and use butane gas for general purposes such as cooking⁴⁷. There is a very small percentage of households using renewable energies, specifically, solar or agricultural waste (biomass), although there are disparities by region. The same story can be told for the use of power saving devices (Table 7).

Table 7: Percentage of households using different types of energy, by region

| Administrative Region | Biomass | | | Solar | Butane gas | Power saving devices |
|-----------------------|---------|------|--------------------|-------|------------|----------------------|
| | Wood | Coal | Agricultural waste | | | |
| Riyadh | 18.4 | 11.3 | 0.3 | 1.8 | 94.4 | 37.7 |
| Makkah | 3.5 | 12.4 | 0.9 | 1.5 | 96 | 41.5 |
| Madinah | 6.5 | 11.3 | 2.2 | 1.4 | 97.9 | 28.5 |
| Al-Qassim | 26.9 | 5.1 | 0.5 | 1.3 | 97.9 | 35.3 |
| Eastern Region | 4.6 | 15.5 | 0.3 | 2.1 | 82.5 | 49.7 |
| Asir | 24.9 | 12.6 | 1.6 | 1.1 | 99 | 18 |
| Tabuk | 13.7 | 5.1 | 0.1 | 1.3 | 99.1 | 20 |
| Hail | 26.6 | 15.5 | 4.7 | 2.3 | 99.8 | 37.7 |
| Northern Borders | 10 | 20.9 | 1.3 | 1.6 | 99.6 | 11.7 |
| Jazan | 19.5 | 16.5 | 4.9 | 1.5 | 99.7 | 21.5 |
| Najran | 48.4 | 10.1 | 1.7 | 1.9 | 99.5 | 19.4 |
| Al-Bahah | 14.6 | 7.6 | 0.1 | 0.8 | 99.9 | 28.5 |
| Al-Jouf | 15.3 | 16.5 | 0.3 | 0.9 | 99.9 | 28.6 |

Source: Bulletin of household energy survey 2019

SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Most vulnerable groups: Women and girls, Children, Migrants

KSA's GDP growth has been relatively small in the last 5 years, with almost no growth in 2019 (0.3%). Although there is still heavy dependence on the hydrocarbon sector (40% of economic activity), there has been a steady reduction in the reliance on this sector in the last decade, which has been compensated by the growth in the non-oil sectors (Figure 3). There was an improvement in real GDP for non-oil in 2019 and early 2020⁴⁸. In addition, the drop in the hydrocarbon sector in 2019 is due to the fall in average crude oil output by about 0.5 mb/d and the fall in prices, but overall extraction has increased on average in the last decade. With the impact of the pandemic, there is an expected fall in GDP growth of 4.4% in 2020 (similar to the United States growth decline and the global economy) and the government projects an increase of 5.2% for 2021⁴⁹.

The Kingdom's exports are also reliant on oil and derivatives, representing about 64% of total exports as of June 2020⁵⁰. Such is the dependence on oil that the price shock of 2020 given the COVID-19 pandemic implied that, as of Q2 2020, total exports went down by 53.6% to SAR 117.1 billion compared to SAR 252.6 billion in Q2 2019. Oil was the main responsible for the slump, with the total exports declining by 61.8% to SAR 74.8 billion. This makes KSA's foreign accounts very exposed to oil price shocks, which is an undesirable situation in a country with fixed exchange rates and limited possibility

⁴⁷ Source: Household Energy Survey 2019

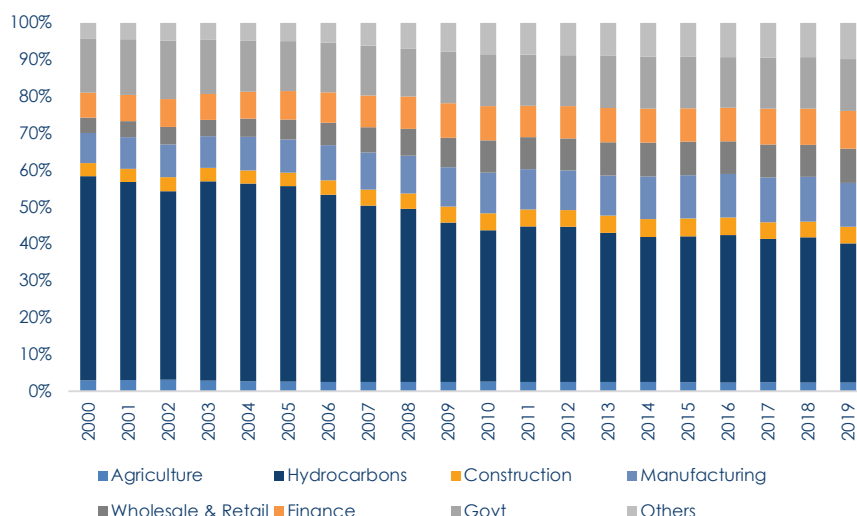
⁴⁸ Source: Saudi Arabia Budget Statement 2021

⁴⁹ Source: Saudi Arabia Budget Statement 2021

⁵⁰ Source: SAMA Monetary and Banking Developments Third Quarter, 2020

of monetary policy. With the pandemic, the increase in uncertainty and the contraction of the global economy in 2020, the Kingdom saw a significant decline in oil production (5.7% for first three quarters of 2020, to try to stabilize the price of oil for OPEC+ countries)⁵¹. This is also evidence of the need reduce the dependence on oil to avoid sharp shocks to the demand and prices.

Figure 3: GDP profile by economic activity



Source: SAMA Annual Statistics bulletin

Consumption has been the key driver for economic growth in KSA in the last 15 years. While private consumption forms the largest part of the overall consumption profile, one of the key consumption drivers is government spending. However, consumption in KSA is coupled with high levels of fiscal deficit, driven by the Kingdom’s emphasis on infrastructure, health, and education, as well as the increase in defense-related expenditures. The average Fiscal Deficit (FD) in the past five years amounted to 9.7% of GDP but has experienced a steady reduction (deficit of 4.5% of GDP in 2019). The deficit was financed by a combination of government withdrawals from deposits - dropping from 19.1% to 17.8% of GDP in 2018 and 2019 - and debt issuances - with the debt to GDP ratio rising from 19.0% to 23.1% in 2018 and 2019.- With the pandemic, the FD is expected to peak at 12% of GDP in 2020, going back to around 5% in 2021 (see more details in section 3.9)⁵².

The Kingdom’s labor market comprised 13.6 million employees as of June 2020 (including 3.7 million domestic workers)⁵³. The labor market is largely composed of Temporary Contractual Workers, making up 69% of the total jobs. Saudi Arabia employed 1.28 million people in the government sector, with Saudi’s representing 96.2% of total employees⁶. Women make up only 18.1% of the KSA’s labor force as of 2020⁵⁴. There is a significant gender gap in overall participation rates, although female participation has steadily increased since 2017 (Figure 4)⁵⁵, driven by the government’s efforts to improve the employment opportunities for women under Vision 2030 and Saudization drive. As a result of the

⁵¹ Source: Saudi Arabia Budget Statement 2021

⁵² Source: Saudi Arabia Budget Statement 2021

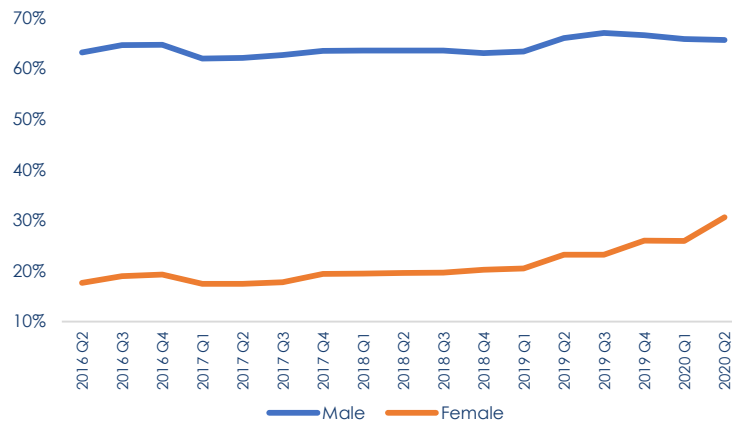
⁵³ Source: Labor Force Survey, GaStat Q22020

⁵⁴ Source: SAMA Statistics

⁵⁵ Source: Labor Force Survey Q22020

government's efforts⁵⁶, female employment in the public sector remains relatively high at 41%. This is not the case in the private sector, where 90% of the workforce are all male employees as of Q22020.

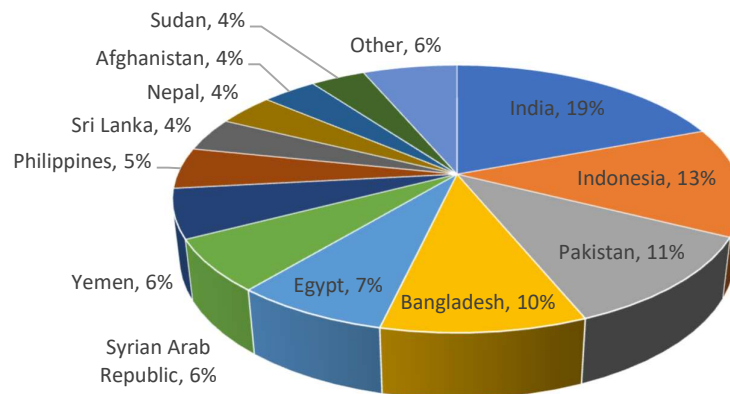
Figure 4: Labor market participation rate, by gender



Source: Labour Force Survey – GaStat Q2 2020

In the private sector, the total number of employees stood at 8.6 million as of Q22020. Non-Saudis made up the majority of the private sector workforce, representing 77% of the total. However, there has been a decline in the number of non-Saudi workers in the Kingdom during the last five years and into 2020. As a response to this decline and as a way to improve labor market conditions, the Kingdom eased the restrictions on foreign workers (starting March 2021), allowing job mobility, electronically digitizing work contracts and regulating the issuance of work Visas for non-Saudis in the private sector.⁵⁷ Non-Saudis are predominantly from India, Indonesia and Pakistan (Figure 5).

Figure 5: Foreign population by country of origin



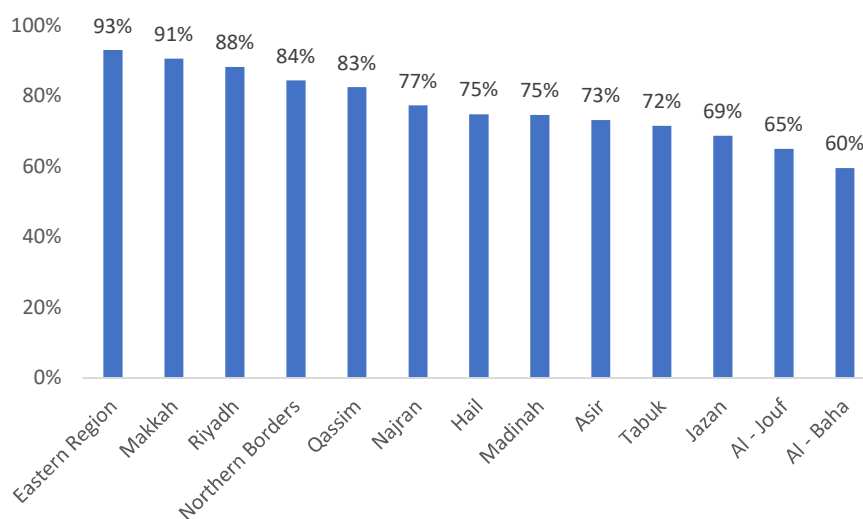
Source: United Nations (2015)

⁵⁶ Source: Vision 2030

⁵⁷ Source: BBC

There are some regional disparities in terms of non-Saudi workforce, ranging from 50% in Al-Baha and Al-Jaouf to about 70% in Makkah, Qassim and the Eastern Province (see more details in the Economic Transformation section). However, bigger differences can be seen in terms of access to social insurance. As can be seen in Figure 6 while more than 90% of the workforce are covered in the Eastern Province and Makkah, only 60% are covered in Baha. This statistics show that labor is more precarious in the least developed regions.

Figure 6: Percentage of workforce subject to social insurance



Source: GaSTAT Labor market statistics Q2, 2020

Total unemployment was 9% in Q2 2020, with a significant gender gap (25.3% for females, 4.7% for males) and an overall higher unemployment rate for Saudis (15.4% vs. 3.1% for non-Saudis). This overall unemployment rate was 5.7% in Q1 2020 and was steady for the past four years, showing the impact of COVID-19 in the labor market. There was a sharp increase in unemployment during the pandemic, but the government expects it to gradually decline and return to previous levels in 2021⁵⁸.

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

Most vulnerable groups: Women and girls, Persons with Disabilities

Investment in infrastructure and transportation in KSA has been kept steady at 6-7% of total revenues⁵⁹, but it has increased in absolute terms by 35% in the last 4 years. This is part of KSA's Vision 2030 infrastructure development objectives. There have been significant investments in transportation-related infrastructure. Between 2013 and 2018, almost 6 thousand kilometers of paved roads were constructed⁶⁰. Almost one quarter of roads were main roads linking major regions of KSA to international borders and urban areas⁶¹. Investment in airports has helped to steadily increase traffic. In terms of air traffic, the General Authority of Civil Aviation⁶² announced its highest peak in passenger and flight figures in 2018. Almost 100 million passengers travelled through the Kingdom's airports, as

⁵⁸ Source: Saudi Arabia Budget Statement 2021

⁵⁹ Source: Annual Statistics SAMA 2019

⁶⁰ Source: GaStat 2019, Ministry of Transportation

⁶¹ Source: National Industrial Development Center

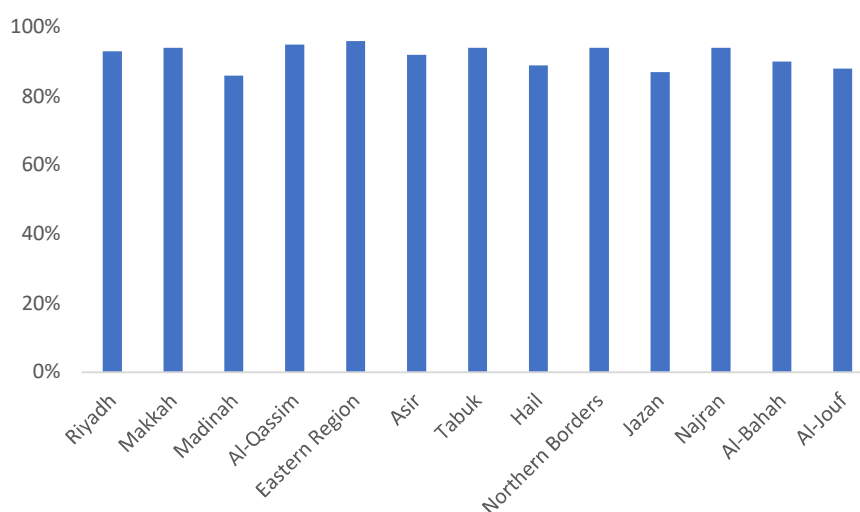
⁶² Source: GACA

well as 771 thousand flights (8% and 4.1% growth from 2017, respectively), a record driven by international airport traffic.

The ICT (Information and Communication Technologies) infrastructure in the Kingdom has been significantly upgraded over the past few years, with almost 90% of the population covered by mobile 4G networks⁶³. The country was ranked 105th in 2017 in internet speed before the recent jump to 10th position. While the Kingdom has invested heavily in digital infrastructure and digital government platforms, the main jump came about around 2016 under the Vision 2030 which pursues a wide strategy of diversification and innovation, including an investment in digital technologies. According to Oxford Business Group, Saudi Arabia has the 2nd highest spectrum allocation among G20 countries and 3rd global ranking in 5G deployment.

Access to mobile phones is almost universal, while the internet is available to almost 93% of households, the majority of which access it at least once a day⁶⁴. Still, some roadblocks exist to make internet access universal, with lack of required skills and high costs preventing households' access. Moreover, internet access is also not equally distributed by region, varying from 86% in Madinah and Jazan to 96% in the Eastern Region (Figure 7).

Figure 7: Percentage of households with internet access, by governorate



Source: *Bulletin of Households and Individuals' ICT Access and Usage Survey 2019 - GASTAT*

Access to computers is still somewhat limited despite high levels of access to the Internet and the widespread use of mobile phones. There is a significant difference in access to computers between Saudi and non-Saudi households, as 63% of the former have a computer while only 36% of the later have one. This shows existing inequalities by nationality in access to technology.

Gender disparities are mild with respect to access to new technologies but have not disappeared completely. In terms of access to the internet (91% males vs. 85% females) and cell-phones (98% vs 95% respectively), the numbers are relatively similar. Still access to computers, which has a strong impact on employment opportunities, does show gender disparities, as 52% of males have access to a computer while only 38% of females do. It is clear that KSA has made progress in telecommunications across

⁶³ Source: GaSTAT Saudi Arabia SDG report 2019, Communications and Information Technology Commission

⁶⁴ Source: Bulletin of Households and Individuals' ICT Access and Usage Survey 2019

regions, nationalities and gender, but access to computers are still unequal and pose a challenge for future skilled labor development.

SDG 10: Reduce inequality within and among countries

Most vulnerable groups: Women and girls, Children, Persons with Disabilities

KSA inequality status presented here is obscured by lack of systematic data on income distribution and is based on estimates. Nevertheless, the Gini coefficient estimate of 0.72 shows significant inequality concerns. For comparison purposes, the Gini coefficient is 0.33 on the OECD on average⁶⁵. The figure puts the KSA on par with some of the world's most unequal countries, including Swaziland, Nigeria, Namibia, South Africa and Mexico⁶⁶.

The KSA does produce some estimations, including the King Khalid Foundation's Gini Intergenerational Equity report (2019). There the Gini is estimated at 0.422. However, it is based on expenditure data and not income. Given that the wealthiest individuals spend a smaller share of their income than the poor it is a flawed estimate and hides the true nature of income inequality. Based on data from the Household Income and Expenditure Survey, the ratio of the top quintile average income over the third quintile is 3.26, which is in line with Alvaredo, Assouad and Piketty (2018) findings (Table 7). Moreover, 32% of the population is living under 50% of the median income, which means that the income distribution is skewed, with a higher percentage of poorer population than the expected value (25%)⁶⁷.

There are also significant differences between national origin, as inequality is larger among Saudis (ratio 3.3) than non-Saudis (ratio 3.0). Moreover, the average income of a Saudi household of SAR 14,824 more than doubles the average of a non-Saudi household (SAR 6,898) as of 2018⁶⁸.

Table 8: Gini index and income distribution

| Bottom 50% | Middle 40% | Top 10% | Top 1% | Gini average | P10/average | P50/average | P90/average | p99/average |
|------------|------------|---------|--------|--------------|-------------|-------------|-------------|-------------|
| 8% | 30% | 62% | 20% | 72% | 9% | 28% | 223% | 964% |

Source: Alvaredo, Assouad and Piketty (2018) with data as of 2016

In terms of the job market, there is a sharp difference in participation and unemployment by gender and age. The rate of economic participation of Saudis in 2018 was 42% but hides that 63% of working-age males and 20% only of working-age females were economically active participants. This difference is also evidenced by the unemployment rate, which is 6.8% among males and 26.9% among females⁶⁹. Another indicator for limited prospects in education and the labor market is the rate of young people (15-24) not in education, employment or training. The total rate in the Kingdom in 2016 amounted to 20% of young people, but this hides a significant gender gap with 29% young women and 8% young men falling into this category.

One of the markers of inequalities in KSA is the percentage of people who own bank accounts. In this case, the differences between subpopulations are significant. Only 58% of women own bank accounts in the Kingdom, which is low compared to the average rates of high-income countries. In addition, only 50% of the population outside the labor force owns bank accounts, compared to 80% of workers. There

⁶⁵ Source: OECD

⁶⁶ Source: World Bank

⁶⁷ Source: GaSTAT Saudi Arabia SDG report 2019

⁶⁸ Source: GaSTATs Household Income and Expenditure Survey

⁶⁹ King Fhalid Foundation Intergenerational Equity report 2019

are also financial access differences among income levels and education levels: 25% of poor individuals own a bank account compared to 75% among other income groups. And 65% of individuals with elementary degrees versus 73% of those with high school or higher degrees own a bank account⁷⁰. This highlights the importance of providing decent and inclusive employment and education opportunities, and especially those that come from low income households.

In terms of social protection programs, KSA spends about 2.9% of GDP on average⁷¹. The programs include the Citizens Account accounting for almost a third of expenditures, the income Guarantee Program for another third and some other minor programs including Cost of Living Allowance, Social Care and School Programs, among others. For comparison purposes, the average spending on the OECD reaches almost 20% of GDP⁷². Therefore, there is big room for improvement in terms of social assistance to the poor.

SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable

Most vulnerable groups: Children, Persons with Disabilities, Refugee and Asylum Seekers, Internally Displaced Persons

Urbanization is a challenge for cities in Saudi Arabia. For example, in Riyadh 20% of city lots are subdivided due to land speculations and the owners keep them undeveloped while waiting for a significant rise in prices (Aina et al., 2019). Planning has insofar been decentralized, but new plans are underway. Saudi Arabia has established initiatives and projects to build smart cities as part of the Vision 2030 program. The King Abdullah Economic City, one of the new smart cities, is being built to have modern smart infrastructure and e-services worth USD 100 billion (Aina et al., 2019). Still, these big projects are still underway and face challenges of their own, including delays in completion and settling of residents.

A new development housing program (Sakani) was introduced in 2017 to boost homeownership by Saudis in need (level of assistance based on household income and size), including those receiving assistance through the Income Guarantee Programme. This program is complemented by several other initiatives within Vision 2030 to improve affordability. As of June 2020, 1,7 million people have benefited from the programs, a rapid increase of approximately 315% from 2017 and most beneficiaries of residential support contracts have been for ready-made units, regardless of the region, which is evidence of the housing program efforts⁷³. Moreover, people living in slums has declined from 18% in 2015 to 16.2% in 2018, which partially shows the outcomes of these housing programs⁷⁴. There do exist some difference in roll-out of the plan when measured in per capita terms, with Najran and Baha having significantly less beneficiaries than Riyadh and Qaseem⁷⁵. The main objective of these programs is to reduce informal housing, which is characterized by substandard development, as they lack access to basic services. Particularly vulnerable to informal housing are rural migrants pursuing job opportunities in the cities. Settlements are predominant in Makkah and Madinah as well as Jeddah.

In terms of life quality in the cities, most of the Kingdom's population is exposed to extremely high levels of air pollution, which are a threat to human health, and it comes with an estimated economic cost of 37 billion Riyals. Effects of air pollution in human health include respiratory and cardiovascular diseases, as well as the risk of premature death⁷⁶, and 85% of Saudis are exposed to air pollution, particularly in

⁷⁰ King Fhalid Foundation Intergenerational Equity report 2019

⁷¹ Source: IMF 2018

⁷² Source: OECD 2020

⁷³ Source: Ministry of Housing

⁷⁴ Source: United Nations Statistics Division, SDG Country Profile Saudi Arabia

⁷⁵ Source: Ministry of Housing 2019

⁷⁶ Source: King Fhalid Foundation Intergenerational Equity report 2019

urban areas. Brauer et al. (2015) estimated that on average Saudi's life is shortened by almost 1.5 years as a result of air pollution. Air pollution levels widely exceed WHO standards (standard is 20 µg/m³ annual mean⁷⁷, Table 8).

Table 9: Annual average for particle levels (particles of category 10) in cities (weighted by population)

| City | 2015 | 2016 | 2017 | 2018 |
|--------------------|-----------|------|------|------|
| Riyadh region | 181 | 118 | 142 | 157 |
| Makkah region | 80 | 116 | 125 | 93 |
| Jeddah Region | 108 | 111 | 105 | 85 |
| Madinah region | 125 | 95 | 103 | 92 |
| Eastern Region | --- | --- | --- | 119 |
| Qassim region | 55 | 121 | 116 | 81 |
| Abha region | --- | --- | --- | 59 |
| Tabuk region | --- | 83 | 96 | 70 |
| Hail region | --- | 97 | 140 | 102 |
| Taif region | --- | --- | --- | 86 |
| WHO average | 20 | | | |

Source: General Authority for Meteorology and Environmental Protection, GaStat and WHO

SDG 12: Ensure sustainable consumption and production patterns

Currently, municipal solid waste (MSW) in KSA is considered as a significant issue, with an annual generation of 14×10⁶ tons, most of it from the main cities of Jeddah, Damman and Riyadh (Radwan and Mangi, 2019). In per capita terms, waste generation increased by 50%, from 1.15kg in 2011 to 1.72 kg in 2018⁷⁸. MSW in the KSA contains about 40% organic waste, showing a good potential for energy production, which is unexplored in the Kingdom. MSW production increases demand for landfills, which occupy huge areas of land and create environmental problems. Incinerating MSW can reduce its volume by 90% and generate energy and should be explored as an alternative for waste management in the Kingdom's main cities. The 2030 Vision has laid out a plan to target 100% of MSW, 60% of construction waste and 85% of industrial waste away from landfills⁷⁹. This will require the construction of treatment facilities and an improvement of recycling capabilities.

A rise in the amount of solid waste produced annually will be the consequence of the increase in industrialization and urban development in the Kingdom. Currently, several initiatives are in process to promote sustainability, including carbon cycling investment and a green hydrogen plant. In terms of industrial waste, industrial wastewater treatment has reached 95% of available capacity⁸⁰. In addition, over 50% of the industrial waste is recycled, but there is an imbalance in used and purchased waste in KSA, where plastic and metals are the most used by industrial establishments but the least upcycled⁸¹. There are several potential avenues to improve industrial waste treatment, given the Kingdom's emphasis in infrastructure investment. These could include an increase in available wastewater treatment capacity, more education and resources on how to properly recycle at the industrial level and generalized efforts to build infrastructure to increase the capacity for industrial recycling.

⁷⁷Source: WHO

⁷⁸ Source: GaSTAT

⁷⁹ Source: International Trade Administration

⁸⁰ Source: Royal Commission for Jubail and Yanbu

⁸¹ Source: Survey of the Economic Environment (industrial), 2017

Lastly, in terms of treatment of water there have not been any significant developments in the last decade, as the percentage of treated water has remained stable at about 50%⁸². It should be noted that Saudi Arabia has made efforts to achieve sustainable environmental development by ratifying several international multilateral environmental agreements related to hazardous substances, including the Basel Convention, the Stockholm Convention, the Rotterdam Convention and the Minamata Convention.

SDG 13: Take urgent action to combat climate change and its impacts

Most vulnerable groups: Persons with Disabilities, Refugee and Asylum Seekers

Climate change accounted for over 130 million dollars in losses in 2018⁸³ and almost one billion dollars in losses during the period 1980-2010 (Al-Bassam et al., 2014). The most straightforward impact of climate change in the Kingdom is the increase in temperatures. Ambient temperature has increased by 4°C more than its expected average in the last five decades (Al-Bassam et al., 2014). There are areas with temperature records of up to 52°C in the summer due, which is negatively impacted by vehicle emissions and human activities (Abubakar and Aina, 2016).

KSA is at particular risk of climate change, given its sensitive ecosystems and hyper aridity of the climate (Abubakar and Dano, 2020). The country has very limited freshwater resources and frequent drought and coastal flooding while being one of the most water-stressed regions in the world, all of which make it ranked 103rd (out of 135) in the 2020 Global Climate Risk Index⁸⁴. The Kingdom also faces additional water-related risks due to severe declines in precipitation and over extraction of underground aquifers (DeNicola et al., 2015). Water resources are also in decline, as freshwater sources face an expected reduction of 241–1435 million m³ per year (Odhiambo, 2017), largely due to the increase in temperatures and the demand for irrigation (Chowdhury and Al-Zahrani, 2013).

Total CO₂ emissions by KSA have increased steadily over the last 20 years due to continuous growth in consumption, particularly of oil fuels (Figure 8). Per capita emissions are among the highest in the world. This has led the KSA to increase its global footprint to reach 1.8% of world emissions even if it holds less than 0,5% of the world population⁸⁵. This is clearly an unsustainable long-term consumption path. Nevertheless, the country's dependence on oil exports and ongoing demographic pressures make it difficult to change course without significant policy changes.

The government is addressing many of these challenges with several mitigation and adaptation measures, which are expected to have diverse economic and social impacts on the country. These include renewable energy development (Malik et al., 2019), carbon capture and storage (Liu et al., 2012), electricity and water conservation measures (Gazze and Abubakar, 2018), environmental research (Aina et al., 2019) and urban planning schemes like green buildings and sustainable transportation (Abubakar and Dano, 2020). It should also be noted that the death and injury rated due to disaster in the last four years is decreasing, so the country is better prepared to face challenged⁸⁶.

Figure 8: CO₂ emissions per capita

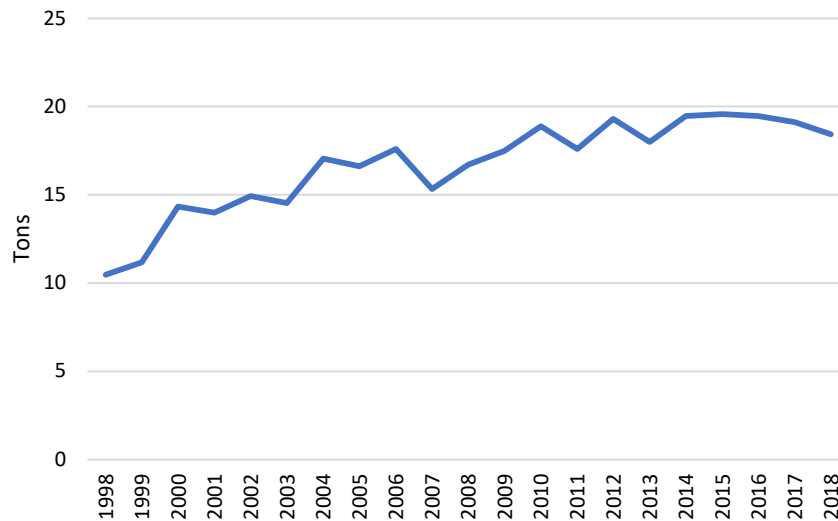
⁸² Source: GaSTAT

⁸³ Source: Global Climate Risk Index 2020

⁸⁴ Source: Global Climate Risk Index 2020

⁸⁵ Source: World Bank

⁸⁶ Source: General Directorate of Civil Defense



Source: World Bank

SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

KSA is responsible for 22% of the world production of brine⁸⁷. The main byproduct of water desalination is brine, which causes serious environmental problems, as the extra-salty water damages marine life (each liter of desalinated water produces 1.5 liters of brine)⁸⁸. The desalination process also requires sucking water from the sea, which inevitably kills fish, eggs and plankton, as these get stuck on the intake screens (Robbins, 2019). With KSA significantly relying on water from desalination for consumption purposes, there is a need to find alternative sustainable sources of water production in the near future, given the negative impact of desalination on marine biodiversity and water resources.

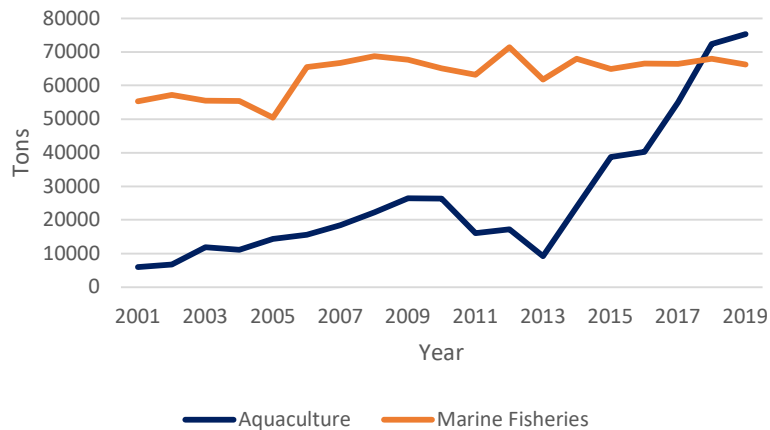
When it comes to sustainability of marine resources, aquaculture has been practiced in KSA for the last three decades as a sustainable method to supply seafood to a growing demand for seafood consumption. This practice has overtaken traditional fishing methods in the last decade, increasing at an exponential rate since 2013 (Figure 9). With stagnant growth in capture fisheries, declines in fish balances within biologically sustained levels (71% in 2010 vs. 48% in 2018) and stricter safety regulations imposed on imports, aquaculture is expected to be the main source of supply of seafood in KSA⁸⁹. The growing local consumption of seafood, driven by population growth and increase in consumption per capita is expected to generate an additional demand of 500,000 tons in 2030.

Figure 9: Total catch by type of fishing activity, in tons

⁸⁷ Source: Reuters

⁸⁸ Source: United Nations

⁸⁹ Source: Ministry of Environment, Water and Agriculture



Source: Ministry of Environment, Water and Agriculture Statistical Book 2019

SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Forests in KSA are threatened by the severity of the environment, which includes heavy rainfalls, droughts, high temperatures and the expansion of agriculture⁹⁰. The high demand for firewood is another factor the current levels of forest and vegetation (Al-Abdulkader et al, 2009, Al-Subaiee, 2015). With forests representing slightly over 1% of the total land in the Kingdom, there is an additional pressure on forest cover⁹¹. KSA loses 120,000 hectares of trees every year through destruction and tree logging⁹². Land threatened by desertification ranges from 70 to 90 percent in the Kingdom. This is particularly worrisome as the country is mostly desert, farmland and forestry are already very limited and 14% of the total land in the Kingdom is already degraded⁹³. As an initial step towards conservation, and as part of the Vision 2030 environmental objectives, the Kingdom launched a forestation campaign set to run from October 2019 to April 2020⁹⁴.

SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Most vulnerable groups: Women and girls, Children, Human Rights Defenders

From a human rights lens, SDG 16 is one of the priority areas for the United Nations, with 35% of all of Human Rights observations and recommendations made under this goal (Kuncic, 2021). The majority of human rights observations under SDG 16 are also directly linked to women and girls (SDG 5) and children (SDGs 2 and 8).

From a broader perspective, KSA ranks at the bottom of many of the international freedom comparisons, such as internet liberty, press freedom and political rights⁹⁵. It ranks 149th of 162 in the human freedom index, specifically due to lack of religious freedom, lack of liberty of expression and information, lack of freedom of movement and political expression. This is coupled with a slow judicial

⁹⁰ Source: FAO

⁹¹ Source: GaSTAT

⁹² Source: Arab News

⁹³ Source: GaSTAT

⁹⁴ Source: Arab News

⁹⁵ Source: Freedom House, *Freedom in the World 2020*

system, known for its lack of transparency and independence⁹⁶. The country lacks a formal criminal code and bases its judicial system on the discretionary interpretation of Sharia Law by judges. Furthermore, and as an example of poor handling of criminal justice, over 36% of male detainees in KSA do not have a proper sentence for their crimes⁹⁷. The Kingdom restricts independent media and censors web content, ranking 170th out of 180 in the 2020 World Press Freedom Index⁹⁸ and labelled as “not free”. The country also lags in transparency, with particular concerns in terms of public finance oversight⁹⁹.

KSA also ranks among the 10 most authoritarian countries in the world according to The Economist Democracy Index (2019). Political participation is very limited and restricted to municipal elections only. Elections are influenced by tribal and religious leaders, who are usually connected to the ruling class¹⁰⁰. Moreover, there are no political parties and political dissent is *de facto* criminalized.

In terms of protection to minorities, the treatment to LGBT+ populations is particularly troubling. It is illegal to be LGBT+ in Saudi Arabia. Though this is not codified in any criminal law, it is enforced by the Kingdom’s adherence to Sharia law. Under Sharia, consensual same-sex sexual conduct is punishable by death or flogging, depending on the perceived seriousness of the case. The country scores at the bottom of international rankings for LGBT+ rights. For example, at the Out-Leadership LGBT+ Score the country obtains only 1 out of 10 points. There is no legislation protecting sexual minorities and they face potential harassment. In economic terms, discrimination against LGBT+ people poses serious challenges for talent mobility, retention, and development (see also Social Exclusion Analysis).

At a regional level, KSA backs up the current government in Yemen (within a Gulf country coalition, amidst the civil war). This support has led to conflict with Iran, that supports the rebels and with the United Arab Emirates, that supports secession efforts in Yemen’s south¹⁰¹. The Kingdom has opened its doors to an estimated 1.8 million Yemenis through the sponsorship system for foreigners¹⁰². KSA has also opened its doors and regularized around 700,000 Syrians escaping conflict (Osmandzиков, 2020).

In terms of terrorism risk, although the country has not suffered major attacks recently and ranks at the middle level of risk, its proximity to Yemen implies a risk. Yemen was the only country to experience a worsen in terrorism risk in 2019, with attacks and deaths increasing by 67% and 31%, respectively¹⁰³. This follows the security vacuum created by the ongoing conflict. Saudi Arabia is then exposed to a surge in its own risk due to its involvement in the conflict. Also, noteworthy, the murder rate is increasing, from 196 murders in 2015 to 285 at the end of 2019¹⁰⁴.

SDG 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Most vulnerable groups: Women and girls, Children, Persons with Disabilities

The Kingdom has approved several strategies and plans including the National Environment Strategy, National Biodiversity Strategy, Riyadh region plant cover restoration strategy in order to make strides in

⁹⁶ Source: Heritage Foundation

⁹⁷ Source: GaSTAT

⁹⁸ Source: Reporters without borders

⁹⁹ Source: Transparency International

¹⁰⁰ Source: Freedom House

¹⁰¹ Source: Global conflict tracker 2020

¹⁰² Source: UNOCHA

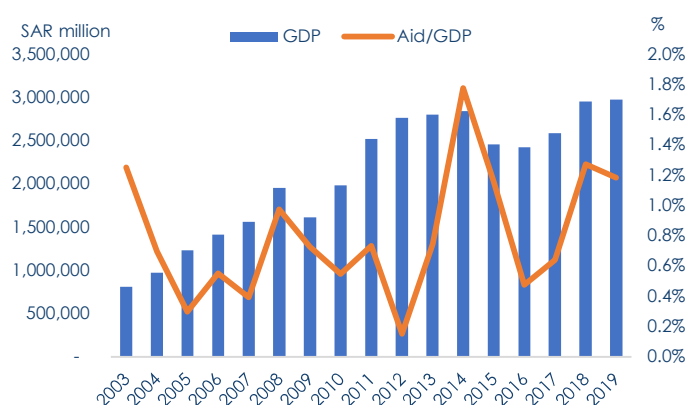
¹⁰³ Source: Global Terrorism Index 2020, Institute for Economics & Peace

¹⁰⁴ Source: Ministry of Interior- Public security

the achievement of the SDGs. In line with Vision 2030, KSA recently adopted a strategy to provide clear statistical development data, which is reliable, up-to-date and useful for inter country comparisons.

Foreign aid is an important element of international cooperation. The Kingdom has a strong policy of development loans and foreign aid, with an annual average of approx. 1% of GDP each year¹⁰⁵, which is considerably above the UN target of 0.7% (Figure 10). In comparison, the OECD countries donated on average 0.3% of GDP in 2019¹⁰⁶. This makes the KSA the fifth biggest donor in the world in absolute terms, behind only the US, Germany, the UAE and the UK¹⁰⁷. Humanitarian assistance forms an important part of Saudi Arabia’s overall aid, being one of the largest providers in the GCC. Approx. 95% of aid is of bilateral nature¹⁰⁸, although KSA also contributes to multilateral organizations mainly to WFP, UNICEF and UNWRA. KSA is an important contributor of the UN, with USD 508 million in 2018, representing 0.91% of the total UN funds, making the Kingdom the 18th largest contributor to the UNS¹⁰⁹.

Figure 10: Aid



Source: SAMA Annual Statistics Bulletin 2019

Another way the KSA is closely connected with foreign countries is through its large foreign workforce. Expat workers make up three-quarters of total workers in the Kingdom and most foreign workers come from Syria, India, Pakistan, Bangladesh, the Philippines, and Sri Lanka. The amount of remittance outflows makes KSA the third largest exporter of remittances in the world¹¹⁰. Remittances have been a relatively steady proportion of the GDP, ranging from 3.9% to 5.9% but there has been a steady decline in the last few years.¹¹¹ Studies show that remittances alleviate poverty, improve nutritional outcomes, increase expenditure on education and reduce child labor¹¹². However, the reduction in remittances due to COVID-19 and an overall decline in foreign labor could negatively impact vital income sources for families in developing countries.¹¹³

¹⁰⁵ Source: SAMA

¹⁰⁶ Source: OECD

¹⁰⁷ Source: Factsheet, KSA in the UN

¹⁰⁸ Source: SAMA Annual Report 2019

¹⁰⁹ Source: Factsheet, KSA in the UN

¹¹⁰ Source: World Bank

¹¹¹ Source: GaSTAT and World Bank

¹¹² Source: WHO

¹¹³ Source: World Bank

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