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Social and economic benefits, supporting sustainable development, measures taken and proposed for the implementation of resolutions and evaluation of the work of the Group of Experts

The impact of using a geographical names database in Saudi Arabia in the response to the coronavirus disease (COVID-19) pandemic

Submitted by Saudi Arabia **

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The impact of using a geographical names database in Saudi Arabia in the response to the coronavirus disease (COVID-19) pandemic

By

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Abstract:

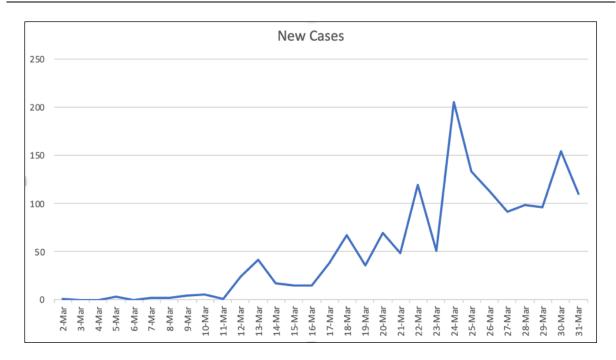
The new Coronavirus (Coved-19) has been a major threat to the world's societies. As the Kingdom of Saudi Arabia has gone through a dangerous phase of the epidemic, the Ministry of Health has used interactive maps based on the geographical name database to illustrate the potential danger of the spread of the new Corona virus (Coved-19) at the level of governorate regions, provinces, villages, and cities where geographical names have been clearly visible. These maps also helped indirectly to identify some of the non-current or unknown geographical names and to establish the geographical name in mind in its correct location and form on digital maps. These geographical names are also propagated through news bulletins and other media; especially some of the obscured geographical names (e.g., SABT AL 'ALĀYĀ, ṢĀMṬAH, QILWAH, RAFĀ'I' ALJIMSH, AL MADDAH, MULAYJAH, WĀDĪ IBN HASHBAL, AL ḤAJARAH, THURAYBĀN, RUWAYDAT AL 'ARD).

The National Committee on Geographical Names in the Kingdom of Saudi Arabia has been making efforts to spread the culture of Romanized geographical names in the Kingdom, but it is met sometimes with obstacles by health institutions when they fail to grasp the benefits of the Romanization system for geographical names. It was obvious when viewing the maps showing the distribution of cases in the governorate regions, provinces, cities, and neighborhoods in a non-Arabic language.

The epidemic's entry into the Kingdom and How it is met:

The first case of the 2019-20 coronavirus pandemic appeared in Saudi Arabia on March 2, 2020. The virus first appeared in Al Qatīf in the Eastern Region. The first confirmed cases were to Saudis who returned from Iran, after their visit to the eastern Iranian city of Mashhad. The Kingdom's government was overly concerned about the spread of infection not only among Al Qatīf population, who tend to engage in many social gatherings, but also villages adjacent to the province through workplaces, friends, and relatives. The kingdom has taken a courageous step by the help of geographical maps and place name data bases to isolate the entire province to contain the spread of the coronavirus outside Al Qatīf and its environs. Immediately, the province was quarantined. As things unfolded in the rest of the Kingdom, the spread of the virus forced the Kingdom to adopt a more comprehensive national approach.

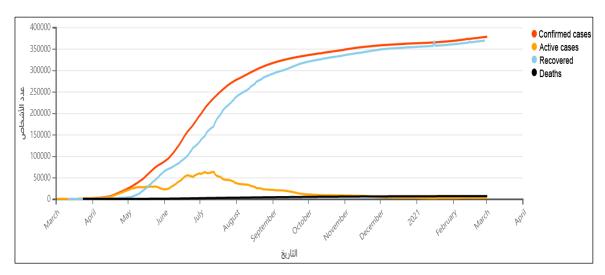
Travel between provinces was banned, and some cities and regions with cases of the virus were virtually closed, in addition of prohibiting movements among parts of cities using police force. These measures, supported by geographical maps and place name data bases, included placing some hospitals on high alert and imposing a cities curfew. By the end of March 2020, Ar Riyād the highest infection rate (36.72%), followed by Makkat Al Mukarramah region (32.69%) and the Eastern Region (20.02%). Figure (1) represents the development of confirmed coronavirus cases in the Kingdom of Saudi Arabia until the end of March 2020.



Source: https://en.wikipedia.org/wiki/COVID-19_pandemic_in_Saudi_Arabia

Figure (1) The evolution of confirmed coronavirus cases in the Kingdom of Saudi Arabia until March 2020.

As of January 16, 2021, there were 364,753 confirmed cases registered in the Kingdom, including 1894 active cases receiving medical care, and 321 critical cases, while the number of recoveries reached 356541 cases, and 6318 deaths, as shown in Figure 2.



Source: https://en.wikipedia.org/wiki/COVID-19_pandemic_in_Saudi_Arabia

Figure (2) Number of infected, recovered, and deceased cases in the Kingdom of Saudi Arabia from the start of the pandemic until March 2021.

The Kingdom's efforts to confront the spread of the epidemic:

Based on the Kingdom of Saudi Arabia's concern for the health of its citizens and residents on the land of the Kingdom and their care - especially in light of this pandemic - and in strengthening the

principle of safety as a strategic value in all the Kingdom's activities, it has worked with the highest degree of precaution and safety. This was exemplified by the formation of the Coronavirus Crisis Management Committee (Covid-19) aiming to develop proactive plans to confront the repercussions of the Coronavirus pandemic. The committee resorted to interactive maps and geographic information systems programs on which the geographical names appear, which have greatly benefited the committee in the application of health preparations and preparedness and the application of precautionary measures and preventive measures that included comprehensive and periodic sterilization operations for all authorities in the country, especially those with a high density of public gatherings, and the intensification of awareness messages and coverage. Information throughout the period of the Coronavirus pandemic, and to ensure that workers' housing meets health requirements, and to activate training and education remotely through interactive study platforms for students of all educational levels.

The use of developed electronic applications to track cases of infection:

The new Corona virus (Covid-19) has become very tricky by transmitting easily between people who are in contact, and by doing so it establishes a large network of infected people once it was released from one person who was not aware of his infection or transmitted the infection to others without his will. Here comes the role of the smart applications that were launched in the Kingdom of Saudi Arabia, including the (Tawakalna) application. These applications detect the network of potential infected people before they occur, and work to break it, by monitoring the infected person through digital geographical names maps in the operations centers, and then informing who They were mixed with the necessity to conduct checks or compulsory home isolation, and these applications contributed greatly to stopping the spread of the virus in many countries, and greatly reduced the number of potential infected people, as a result of monitoring the actual infected through the applications that they installed on their phones. The applications developed by the National Committee on Geographical Names on iOS and Android helped in knowing some of the remote and difficult locations that are difficult to find on other maps, as well as knowing their coordinates and romanizations.

In fact, the National Committee for Geographical Names in the Kingdom of Saudi Arabia has become a hub for all to answer the community and state official inquiries about the locations of geographical places, their pronunciation, and their physical and human geographical characteristics.



Source: https://twitter.com/TawakkalnaApp

Figure (3) cases of permits through Tawakalna application to manage electronic permits during the curfew period.

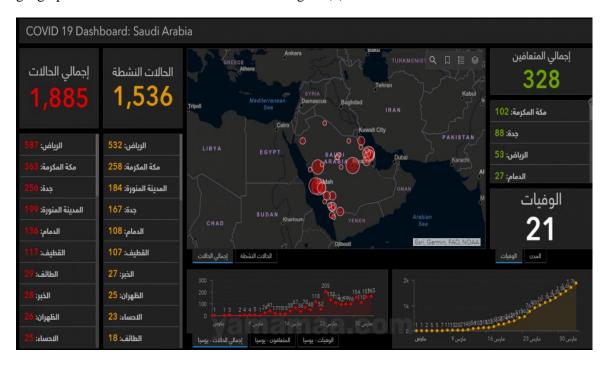
These applications provide real-time and direct information on the number of cases of Corona infection in the Kingdom, and also help in the early detection of suspected cases of infection in the event of the appearance of corona symptoms on the user, and allow citizens and residents to request permission to leave emergency in times of curfew imposed on some cities and neighborhoods due to the outbreak Corona virus, follow-up cases of exit request during curfew time, warn users if they approach areas infested or isolated due to the outbreak. They can be used to report suspected cases of Corona virus to help individuals get the necessary medical assistance for themselves or others. The use of applications on smartphones has not only been used to track the spread of critical cases, but also to determine where the vaccine/vaccination adopted by Saudi Arabia to immunize its nationals as well as expatriates on the kingdom's soil is taken.

The general closure policy in the Kingdom of Saudi Arabia has led to the widespread dependence of citizens on digital services on the Internet in general, and the widespread culture of use, query, and remote education. In the past world, we noticed an increase in the number of views for the geographical names' explorer site for the Kingdom of Saudi Arabia, and the number of explorer application downloads increased during the year 2020.

Creation of an interactive dashboard using the latest GIS technology:

On April 2, 2020, the Ministry of Health in the Kingdom launched an interactive platform to clarify the news of the epidemic, in order to track the reported cases in each region, and the interactive platform contains indicators, graphs and interactive maps showing the epidemiological situation of the pandemic in all 13 regions of the Kingdom of Saudi Arabia and geographical names of cities, noting that the data presented occur periodically around the clock, as part of the Ministry of Health's efforts to provide accurate information on the latest virus through a reliable official platform.

The interactive dashboard shows the total number of new infections with the Coronavirus (Covid-19) classified into: (active cases, recoveries, and deaths), and distributed to several Saudi cities whose geographical names were shown as shown in Figure (4).



Source: https://covid19.moh.gov.sa/

Figure (4) The interactive dashboard of the Ministry of Health in the Kingdom of Saudi Arabia.

The Saudi Ministry of Health has also launched a local Saudi platform developed by the National Center for Disease Prevention and Control (Prevention), showing the numbers of infections by country, as well as comparing cases in KSA with cases abroad, via the following website: covid19.cdc.gov.sa.



Source: https://covid19.cdc.gov.sa/ar/daily-updates-ar/

Form (5) the appearance of geographical names marked by interactive maps of the Kingdom of corona-tracking sites.

The National Committee for Geographical Names in the Kingdom of Saudi Arabia is making efforts to spread the Romanization of geographical names in the Kingdom, but it is still suffering until the present time from the failure of the various governmental institutions in the Kingdom to understand the idea of Romanization of geographical names, especially when presenting the geographical names of administrative regions, governorates, cities, and neighborhoods in a language other than Arabic. As they seek the help of global digital map providers such as companies (Bing, Google Maps, ESRI, Here, OSM), which carry out the operations of transferring characters from Arabic to Latin, but in an inaccurate manner, ignoring the texts of the Unified Arabic System for the transfer of geographical names from Arabic characters to Latin letters 2017, and the National Committee for Geographical Names will communicate with these companies and their regional offices in the countries of the Middle East to clarify the mechanism of Romanization.



Source: https://covid19.moh.gov.sa/

Figure (6) The appearance of the Romanized geographical names in the interactive maps on the Ministry of Health website in the Kingdom.

Points for discussion:

The Group of Experts is invited to discuss and give recommendations on:

- a) how could the collection, management, standardization and dissemination of geographical names support the implementation and monitoring nations' efforts in combating pandemics?
- b) what are the best ways of convincing governmental agencies to take up geographical names standardization seriously, and be in the best coherent mood with the national committees on geographical names on these matters?