RESEARCH REPORT ON

POLYMERASE CHAIN REACTION (PCR) TEST SITUATION

Ministry of Tourism & Wildlife

Kenya Tourism Federation

THIS RESEARCH HAS BEEN COMMISSIONED BY THE NATIONAL TOURISM CRISIS STEERING COMMITTEE UNDER THE MINISTRY OF TOURISM AND WILDLIFE, KENYA, IN COLLABORATION WITH THE KENYA TOURISM FEDERATION

December, 2020

Table of Contents

Table of Contents ii
1.0 Introduction iv
1.1 Resumption of International Travel iv
2.0 Polymerase Chain Reaction (PCR) Test Situation 2
2.1 The Transmission Routes for COVID-19 Virus 2
2.2 What is Polymerase Chain Reaction (PCR) Test? 3
2.3 Countries Situation Analysis 4
2.4 Countries that require Polymerase Chain Reaction (PCR) Tests 5
2.5 Top Destinations with Different Travel Requirements 14
2.6 Long-haul and Transiting Traveller's PCR Test Requirements in Some Countries 16
3.0 Conclusion 18
4.0 References 22



INTRODUCTION



1.0 Introduction

The outbreak of the novel coronavirus (COVID-19) a disease caused by SARS-CoV-2 was first reported in Wuhan, China, in late December 2019 and then it spread globally. On March 11th 2020, having spread across the globe, the World Health Organization (WHO) then declared COVID-19 a pandemic.

1.1 Resumption of International Travel

The tourism industry is a crucial pillar for many countries' economic growth with support to global GDP and millions of jobs (WTTC, 2020). However, the outbreak of COVID-19 pandemic has dramatically caused a massive disruption in travel and other aspects of life (UNWTO, 2020). In a bid to contain the spread of the virus, many countries around the world imposed unprecedented measures such as travel restrictions, closure of borders and business operations in return impacting the tourism economy heavily (www.oecd.org).

The ongoing COVID-19 pandemic will inevitably lead to redefining travel and this requires detailed consideration of many factors especially preparation for travel unlike in the pre-COVID era (www.weforum.org). As the pandemic spreads, many countries are putting in place measures to support the tourism sector by developing tourism recovery strategies. These measures include considerations on lifting travel restrictions, restoring traveller confidence and rethinking the tourism sector for the future (www.oecd.org). According to UNWTO, 2020, as of 1st September 2020, a total of 115 destinations (53% of all destinations worldwide) had eased travel restrictions in order to facilitate the restart of international tourism (UNWTO,2020b).

However, as the restrictions are being gradually lifted, the situation continues to evolve and the outlook remains uncertain. But several countries have begun to establish temporary travel arrangements known as 'travel bubbles', in an effort to stimulate economic recovery and keep international travel afloat during the pandemic (Sharun et al., 2020).

This would give countries that depend on tourism another chance to rebuild their economy that has been heavily impacted by the emergence of COVID-19 pandemic (Ibid). The relaxation of travel restrictions is a critical decision. However, stringent prevention and control measures should be taken to avoid importation or exportation of the COVID-19 virus across borders (Han et al., 2020).

POLYMERASE CHAIN REACTION (PCR) TEST SITUATION



2.0 Polymerase Chain Reaction (PCR) Test Situation

2.1 The Transmission Routes for COVID-19 Virus

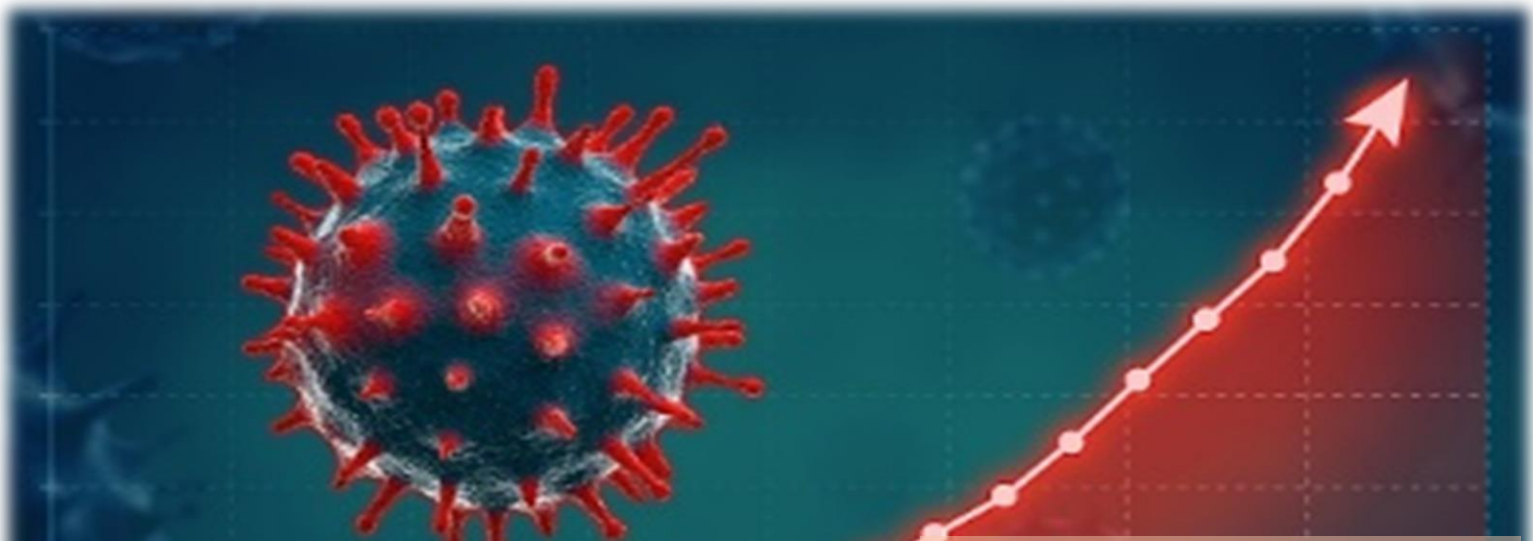
The Covid-19 outbreak continues to evolve and every day there is something new about the virus. The virus can be transmitted from pre-symptomatic, symptomatic, and asymptomatic people infected with it through respiratory fomites.

Pre-symptomatic transmission occurs during the incubation period for COVID-19 virus. This is the time between exposure to the virus and symptom onset, on average it takes 5-6 days, but can take up to 14 days. This means that, transmission can occur during this period from a pre-symptomatic case before significant symptoms develop (Lauer et al., 2020).

Asymptomatic transmission occurs when a person infected with the COVID-19 virus does not develop symptoms. The infectious status of those who are asymptomatic is one challenge that has made COVID-19 pandemic difficult to control (Nishiura et al., 2020). This is because the asymptomatic COVID-19 infections have similar viral load and same infectivity as those of symptomatic infections.

For instance, In Boston, 88% of the COVID-19 positive cases were asymptomatic. In Japan, 30.8% of Japanese citizens evacuated from Wuhan were asymptomatic and 51.7% of COVID-19 cases in the "Diamond Princess" were also asymptomatic.

Symptomatic transmission occurs from a person who has developed symptoms of the COVID-19 virus. The transmission primarily occurs from symptomatic people to others through respiratory droplets, or by contact with contaminated surfaces and objects.



2.2 What is Polymerase Chain Reaction (PCR) Test?

The outbreak of the COVID-19 pandemic continues to cause international concerns and countries' entry requirements keep changing from time to time. The International Air Transport Association (IATA) recommends that governments should safely reopen borders without quarantine.

As nations seek for ways to allow travellers and tourists safely during the pandemic, it is important to provide them with accessible, and reliable testing for the disease (www.iata.org). The essence of testing is to prevent passengers from travelling while being potentially infectious and to prevent travellers from entering destinations while incubating, and then becoming infectious after arrival.

As the reopening begins, many countries are thus seeing a negative Covid-19 PCR test as a good alternative to putting-off quarantine measures. The COVID-19 testing involves analysing samples to assess the current or past presence of SARS-CoV-2 the virus that causes COVID-19. There are many COVID-19 tests but the Centres for Disease Control and Prevention (CDC) considers the PCR test the "gold standard' of Covid-19 testing.

The acronym PCR stands for **polymerase chain reaction**, it is considered one of the best COVID-19 tests different from the regular Covid-19 tests (www.fda.gov). This is because they directly detect the presence of a coronavirus antigen, rather than the presence of the body's immune response, or antibodies.

The PCR tests analyses a sample usually collected via a swab of the inside of the nose and back of the throat, using a long cotton bud. The test involves detecting the coronavirus antigens, which are present in the body before symptoms of the disease are present. Thus, the tests can tell whether or not someone has the virus very early on.

The PCR test taken for travel purposes, needs to be taken within a specific time frame before departure or arrival at the intended destination. This time period varies from country to country, from 48 hours to 120 hours or more. The PCR test is believed to be more accurate and has fewer false negatives than the Antigen test. However, if COVID-19 exposure is very recent it may be too early for any test to detect. Testing should always be performed in consideration of the likelihood of exposure, current health condition, and the presence of any symptoms.

2.3 Countries Situation Analysis

Globally, the number of newly reported cases of COVID-19 continues to increase. As of 17th December 2020, there were over 71.6 million confirmed cases of COVID-19, including over 1.6 million deaths, since the start of the pandemic. America reported the highest cases (30.9 million) and deaths (785,462 deaths) followed by Europe with 21.4 cases and 480,572 deaths. Africa had recorded one of the lowest cases (2.4 million) with 56,342 deaths. South Africa continued to report the highest number of new cases (860,964 cases) in the region.

COVID 19 Cases and Deaths Worldwide

Cases by 17 December 2020

71 554 018 cases; 1 613 671 deaths

America: 30.9M cases; 785,462 deaths

Top 5 counties:

United States (16 256 754)

Brazil (6 901 952)

Argentina (1 498 160)

Colombia (1 425 774)

Mexico (1 250 044)

Europe: 21.4 cases; 480,572 deaths

Top 5 countries

Russia (2 653 928)

France (2 376 852)

UK (1 849 403)

Italy (1 843 712)

Spain (1 751 884)

Asia: 16.8M cases; 290,130 deaths

Top 5 countries:

India (9 884 100)

Iran (1 108 269)

Indonesia (617 820)

Iraq (574 634)

Bangladesh (490 533)

Africa: Cases 2.4M cases; 56,342 deaths

Top 5 countries

South Africa (860 964)

Morocco (399 609)

Egypt (121 575)

Ethiopia (116 769)

Tunisia (111 361)

Oceania: 53,569 cases; 1,159 deaths

Top 5 countries:

Australia (28 031)

French Polynesia (15 747)

Guam (7 106)

New Zealand (1 740)

Papua New Guinea (725)

Adapted from ECDC (2020): https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases



2.4 Countries that require Polymerase Chain Reaction (PCR) Tests

Angola
In order to board international flights to and from Angola, it is mandatory to present a molecular based RT PCR COVID 19 test with a negative result. Testing must be carried out in the **72 hours** prior to departure. Passengers must complete a Travel Registration Form (FRV) up to 72 hours before the date of travel and must sign the commitment term with the conditions defined by the competent authorities. Failure to do so may hinder or inhibit travel.

Cameroon
All persons traveling to Cameroon must carry proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test.

Cape Verde
All persons must show proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test.

Chad
From August 1, 2020, all persons traveling to Chad must carry proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test. Persons intending to remain in Chad more than 7 days must self-isolate for the initial 7 days following arrival and afterwards undergo an additional PCR test for COVID-19. Persons intending to remain less than 7 days must provide their personal information to local authorities for contact tracing purposes.

Comoros
All persons arriving in Comoros must have proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test.

Côte d'Ivoire
All persons, except children under the age of 12, arriving in Côte d'Ivoire from any destination must have a printed negative COVID 19 PCR test certificate issued no more than **72 hours** prior to departure. The sample for the COVID 19 PCR test must be collected no more than 7 days prior to departure. The passenger will also need to complete a Health Declaration Form and present a 4-digit confirmation code on arrival.

Cyprus
Persons traveling from certain countries/regions must present a certificate showing a negative test result for COVID-19 using a polymerase chain reaction (PCR) test performed no more than **72 hours** prior to departure for Cyprus. All persons traveling to Cyprus should apply online for the "CyprusFlightPass" 24 hours before their scheduled flight time.

Croatia
All persons arriving in Croatia must either: carry proof of a negative result for COVID-19 issued no more than **48 hours** prior to departure using a polymerase chain reaction (PCR) test, or self-isolate for 14 days. Persons who, after 7 days in self-isolation in Croatia, agree to undergo testing for COVID-19 at their own expense may shorten the length of time they are required to remain isolated. To facilitate travel to Croatia, the Croatian government asks all foreign nationals prior to departure to submit the online form.

Democratic Republic of the Congo
All persons must submit a registration form online and obtain a QR code for travel to DR Congo. **Upon arrival**, all persons must undergo a polymerase chain reaction (PCR) test for COVID-19. Persons traveling domestically must carry proof of a negative PCR test result issued no more than 7 days prior to their date of travel.

Denmark
Passengers from specified countries are required to present a negative COVID 19 PCR test certificate not older than **72 hours** from arrival to Denmark. Danish nationals and persons resident in Denmark can enter Denmark regardless of the intended purpose of their entry and without presenting a negative COVID 19 tests. They must present the following documents for entry: valid passport, health insurance card, residence permit, residence card, EU registration certificate or personal identification document with proof of address.

Egypt
All passengers, including Egyptian nationals, arriving from overseas, to any part of Egypt must present proof of a negative COVID 19 test certificates issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test. The certificate printed in English or Arabic must be stamped by the laboratory or hospital and must include the following information: The date and time the sample was taken; and the details of the type of sample taken for the swab. All passengers must also complete a health declaration form that will be provided on board the aircraft. Children below 6 years old and transit passengers are exempted from the negative COVID 19 PCR test certificate requirement. Tourists arriving at airports in the coastal governorates of the Red Sea (Hurghada), South Sinai (Sharm El Sheikh), and Marsa Matrouh that are unable to present acceptable evidence of a negative PCR test will need to undergo testing on arrival for a fee of USD $30.

Equatorial Guinea
All passengers from abroad must have a negative PCR test result certificate issued no more than **48 hours**. All passengers have to undergo a mandatory quarantine for 14 days after entry at their own expense.

Ethiopia
All passengers travelling to Ethiopia must present proof of a negative result for COVID-19 issued no more than **120 hours** prior to departure using a reverse transcription polymerase chain reaction (RT-PCR) test. The certificate must clearly mention that an RT PCR test was conducted, the time and date when the sample was taken and have an official stamp of the authorities issuing the certificate. Children under 12 years are exempted as long as they are travelling with their parents and their parents have a negative COVID 19 PCR test certificate. All passengers, except those connecting through Ethiopia, will be required to undergo self-quarantine at home for 14 days.

France
Foreign nationals traveling from a country or region not listed in the exempted list must carry an "exempted international movement certificate for travel to metropolitan France"; and a certificate stating the traveller is not exhibiting symptoms consistent with COVID-19. Persons who have visited one of the following locations within the 30 days of their scheduled departure for France must present proof of a negative test result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test: Algeria, Bahrain, China, DR Congo, Ecuador, Iran, Iraq, Israel, Lebanon, Morocco, Panama, Russia, South Africa, Turkey, Ukraine, United Arab Emirates, United States, and Zimbabwe. Persons without such documentation are prohibited from boarding flights bound for France. All persons arriving from a location not listed above must either: 1) present proof of a negative PCR test result for COVID-19 issued no more than 72 hours prior to departure, or 2) undergo PCR testing upon arrival in France.

Gabon
All persons arriving in Gabon must carry proof of a negative result for COVID-19 issued no more than **5 days** prior to departure using a polymerase chain reaction (PCR) test administrated by a testing provider approved by health authorities in the location of departure.

Gambia
All persons must provide proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test. Failure to present a negative COVID-19 test taken no more than 72 hours before you arrive in The Gambia to Ministry of Health officials will result in you being tested and quarantined for 14 days at your own cost.

Germany
Foreign nationals are prohibited from entering Germany with some exemptions. Proof of registration is required for entry into Germany and all persons having visited a high-risk area must undergo a 14-day quarantine upon arrival. This policy provides exceptions for travellers who present a certificate showing a negative result for COVID-19 issued no more than **48 hours** prior to departure using a polymerase chain reaction (PCR) test performed by a testing provider recognized by the Robert-Koch-Institute. A 10-day quarantine is mandatory for all passengers arriving, who stayed within the last 10 days in a high-risk country.

Ghana
All arriving passengers must hold proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test performed by an accredited laboratory. This policy does not apply to persons returning to Ghana within 7 days of their last departure. Upon arrival, all persons age 5 and older must, at their own expense, undergo an additional test for COVID-19. Travelers must also submit a health declaration form online.

Guinea
All persons arriving on Guinea must complete a health declaration form and present proof of a negative result for COVID-19 issued no more than **5 days** prior to departure using a polymerase chain reaction (PCR) test. Upon arrival, all persons are subject to health screening. Persons exhibiting symptoms consistent with COVID-19 will be isolated and transferred to the Guinean Epidemiological Treatment Center (CT-Epi). Children 12 years old and below are exempted from COVID 19 PCR testing for entry into Conakry.

Guinea-Bissau
All persons entering Guinea-Bissau must present proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test. Persons who do not carry such proof or who are currently exhibiting symptoms consistent with COVID-19 must undergo a 14-day quarantine.

Greece
All international passengers entering Greece must hold a negative COVID 19 PCR test certificate, for a test conducted maximum **72 hours** before arrival in Greece. All passengers flying to Greece from Bulgaria, Romania, Hungary, the Czech Republic, Poland, the United Arab Emirates, Malta, Belgium, Spain, Albania and North Macedonia, with the exception of children under 10 years, must present a negative COVID 19 PCR test certificate, taken not more than 72 hours before arrival. The certificate must be in English, clearly indicating the passenger's name and ID number, and presented to officers of the general secretariat for civil protection and the national public health organisation on arrival.

Jordan
Persons arriving from countries or regions deemed "green" by Jordanian authorities must have proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test. Travelers must have spent the 14 days prior to departure within the "green" country or region and must, at their own expense, undergo an additional PCR test for COVID-19 upon arrival in Jordan. Persons arriving from "yellow" countries or regions must have proof of a negative result for COVID-19 issued no more than 72 hours prior to departure using a PCR test. Persons arriving from "red" countries or regions will undergo the same procedures as apply to "yellow" locations; however, they must also wear an electronic monitoring bracelet during their self-isolation period.

Kenya

The Kenyan authorities issued new directives on entry into the country effective August 1, 2020, when international flights resumed. Under the new regulations, all passengers arriving from countries deemed to be low-to-medium risk coronavirus disease (COVID-19) transmission areas will be exempt from having to quarantine upon arrival. All passengers must produce proof of testing negative for COVID-19 using a polymerase chain reaction (PCR) test no more than **96 hours** before arrival. Countries identified by the government in Nairobi as being low-to-medium risk are: Canada, South Korea, Namibia, Uganda, China, Rwanda, Morocco, Japan, Zimbabwe, Ethiopia, Switzerland, United Kingdom, France, Germany, Netherlands, Qatar, United Arab Emirates, Italy, and the United States (except the states of California, Florida and Texas). Authorities will review the list daily.

Maldives

All tourists and travellers entering the Maldives for a short-term stay must present a negative COVID 19 PCR test result. The COVID-19 test must have been issued no more than **96 hours** prior to initial departure for the Maldives using a polymerase chain reaction (PCR) test. Passengers and airline crew are subject to medical screening on arrival and are to complete the online Immigration and Health self-declaration form within 24 hours of your flight. Residents of Maldives (nationals and expatriates) have to undergo a 14-day self-quarantine on arrival. This policy does not apply to infants less than one year old.

Malawi

All persons traveling to Malawi must have proof of a negative test result for COVID-19 issued no more than **10 days** prior to departure using a polymerase chain reaction (PCR) test. Travelers must undergo an additional PCR test upon arrival and all returning residents must self-isolate for 14 days.

Mali

All persons traveling to Mali must complete an online health declaration and provide proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test.

Mauritania

Foreign nationals permitted to enter Mauritania must carry proof of a negative result for COVID-19 issued no more than **5 days** prior to departure using a polymerase chain reaction (PCR) test.

Mauritius

All persons (including infants and children) arriving in Mauritius must have proof of a negative PCR test result for COVID-19 issued no more than **7 days** prior to departure. Incoming passengers to Mauritius must download and fill their Public Health Covid-19 passenger health self-declaration form and passenger locator form which must be handed over to the Ministry of Health and Wellness counters upon their arrival.

Mozambique

Persons traveling to Mozambique must carry proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test performed in the country or region of departure. Persons must, at their own expense, self-isolate for 10 days upon arrival at their homes or other suitable accommodation. Afterwards, they must undergo an additional PCR test. Persons unable to afford the additional PCR test may elect to self-isolate for a full 14 days. Most land border checkpoints remain closed.

Namibia

Persons arriving in Namibia must have proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test. Those with valid PCR test results are not subject to quarantine; however, they must undergo an additional PCR test on the 5th day following their arrival. Persons traveling to Namibia for tourism must hold medical insurance valid in Namibia with coverage sufficient for any unexpected health-related expenses.

Nigeria

All persons travelling to Nigeria must test negative for COVID 19 in the country of departure. The COVID 19 polymerase chain reaction (PCR) test validity must be done within **120 hours** of departure and preferably within 72 hours of boarding Passengers must present an electronic or hard copy of the result at the airport. Children of the age ten (10) and below are exempt from the COVID 19 PCR test. A second COVID 19 PCR test must be completed within 7 days of arrival in Nigeria.

Republic of the Congo

Persons arriving in the Republic of the Congo must undergo a reverse transcription polymerase chain reaction (RT-PCR) test for COVID-19 upon arrival. This policy does not apply to persons who carry proof of a negative RT-PCR test result issued no more than **72 hours** prior to departure. Persons who test positive on arrival will be transferred to a designated location for treatment. All other persons must self-isolate for 14 days.

Rwanda

Persons traveling to Rwanda must carry proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test and fill in the online form. All persons must, at their own expense, undergo an additional PCR test for COVID-19 at the cost of US$50 and a 24-hour quarantine at a designated facility upon arrival. Masks must be worn in public and all land border checkpoints remain closed.

Senegal

All passengers except children under two years old must present an original negative COVID-19 RT PCR test certificate dating less than **5 days** from the date the test result is received. The certificate must be issued by a laboratory located in the state from which the customer commences their journey and is listed on the list of laboratories approved by this State or a health organisation internationally recognised. All passengers must complete a Public Health Passenger Locator Form in English or in French.

Singapore
There are strict limitations on who can enter Singapore at this time and travellers might require prior approval before travel. From November 18, 2020, all persons arriving in Singapore (regardless of origin) must carry proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test.

The Singaporean government will designate countries / regions as either "lower-risk" or "higher-risk" depending on relevant epidemiological factors and the prevalence of COVID-19 in those locations. All persons arriving from "lower-risk" locations must either: a) undergo a polymerase chain reaction (PCR) test for COVID-19 upon arrival in Singapore, or b) self-isolate for 7 days at their place of residence and undergo a subsequent PCR test. All persons arriving from "higher-risk" locations must undergo a 14-day quarantine at their residence or a designated facility followed by a subsequent PCR test;

Seychelles
Seychelles International Airport is opened for scheduled commercial flights and only passengers from Permitted Countries will be allowed. All travellers, including infants and children must have a negative COVID 19 certificates issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test. Once COVID 19 PCR test results are received, all travellers must submit Health travel authorisation (HTA) for approval.

Sierra Leone
All persons must complete a health form, show proof of prepayment for COVID-19 tests to be carried out on arrival in Sierra Leona, and present proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test. Upon arrival, all persons are subject to both a PCR test and a rapid diagnostic test (RDT). Persons who test positive using the RDT will be quarantined at their own expense while awaiting their PCR test result. Persons who test positive using the PCR test will be contacted by health authorities regarding available treatment options. All land border checkpoints remain closed to passenger traffic.

South Africa
Persons in countries or regions considered by South African authorities to have a high rate of COVID-19 infection and transmission are prohibited from entering South Africa. This policy does not apply to countries or regions on the African continent, or to business travellers holding special permission from the Department of Home Affairs. Persons traveling to South Africa must have proof of a negative PCR test result for COVID-19 issued no more than **72 hours** prior to departure, or undergo quarantine upon arrival at their own expense. Upon arrival in the port of entry, the traveller will be screened for any COVID-19 symptoms or for contact with people who have been infected with the COVID-19 virus. Children who are 5 years and below are exempted from COVID 19 PCR test requirements.

Sudan
All persons arriving in Sudan must have proof of a negative result for COVID-19 issued no more than **96 hours** prior to departure using a polymerase chain reaction (PCR) test performed by a certified provider. This policy does not apply to children age 6 or under.

Tanzania
The Government of Tanzania is implementing temperature scanning for all international passengers arriving into Tanzania. If travellers show symptoms of COVID-19 on arrival, you **may be** required to take a test. If travellers are tested for COVID-19 on arrival, they may be required to self-isolate for 14 days.

Togo
All persons arriving in Togo must carry proof of a negative result for COVID-19 issued no more than **7 days** prior to departure using a polymerase chain reaction (PCR) test. Additionally, all persons must submit an "Immigration and Health Declaration Form," install the "Togo Safe" mobile application, undergo an additional PCR test upon arrival, and self-isolate while awaiting their test results. All land border checkpoints are closed until further notice.

Tunisia
All passengers, travelling to Tunisia regardless of the point of origin must possess a COVID 19 PCR test certificate with a negative result, it must be taken **72 hours** prior to departure and must not exceed 120 hours on arrival in Tunisia. Persons traveling from "green" and "orange" locations must present proof of a negative test result for COVID-19 issued no more than 72 hours prior to departure. Such persons are advised to self-isolate for 7 days upon arrival. Persons in "red" locations are prohibited from traveling to Tunisia.

Uganda
Foreign nationals traveling to Uganda for business or tourism must have proof of a negative result for COVID-19 issued no more than **72 hours** prior to departure using a polymerase chain reaction (PCR) test. The COVID 19 PCR test must be taken at a laboratory approved by the country where the passenger's journey starts. Ugandan nationals returning from abroad with proof of a negative PCR test result must provide their contact information to the Ministry of Health for contact tracing purposes.

United Arab Emirates
All expatriate residents returning to the UAE must present a negative result of a PCR test at the departure airport. This test should have been conducted within **96 hours** before travelling to the UAE. Expatriate residents returning to the 6 emirates other than Dubai no longer need an approval from ICA to return to the UAE.

Zambia
Persons arriving in Zambia must carry proof of a negative result for COVID-19 issued no more than **14 days** prior to departure using a polymerase chain reaction (PCR) test. Additionally, they and undergo screening for COVID-19. All travellers entering the airport must complete a medical questionnaire and will be subjected to temperature and symptoms screening.

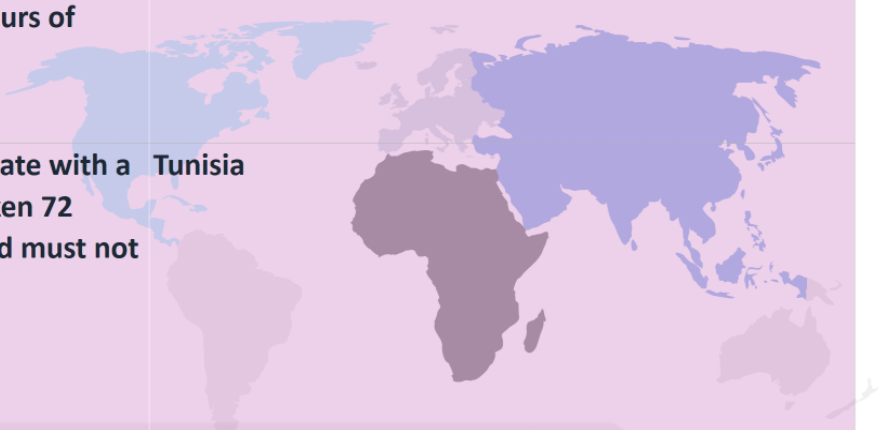
Duration for the negative PCR COVID- 19 test

Period Prior to Departure

Not more than 48 Hours	Croatia, Equatorial, Guinea, Germany
Not more than 72 Hours	Angola, Cameroon, Cape Verde, Chad, Comoros, Côte d'Ivoire, Cyprus, Denmark, Egypt, France, Gambia, Ghana, Guinea-Bissau, Greece, Mali, Mozambique, Namibia, Republic of the Congo, Rwanda, Singapore, Seychelles, Sierra Leone, South Africa, Uganda, Jordan
Not more than 96 Hours	Kenya, Maldives, Sudan, United Arab Emirates
Not more than 5 Days	Ethiopia, Senegal, Gabon, Guinea, Mauritania
Not more than 7 Days	Mauritius, Togo
Not more than 10 Days	Malawi



Negative PCR test validity must be done within 120 hours of departure and preferably within 72 hours of boarding	Nigeria
A COVID 19 PCR test certificate with a negative result, must be taken 72 hours prior to departure and must not exceed 120 hours on arrival	Tunisia
Negative PCR test issued no more than 14 days prior to departure	Zambia



2.5 Top Destinations with Different Travel Requirements

Travel to the United States of America (USA)

With specific exceptions, several presidential proclamations restrict foreign nationals who have been in any of the following countries during the past 14 days from entering the United States: China, Iran, some European Countries (Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Monaco, San Marino, Vatican City), United Kingdom (England, Scotland, Wales, Northern Ireland), Republic of Ireland and Brazil. Different states have also put different restrictions regarding travel during the Covid-19 pandemic period for instance:

Travel to Boston (BOS)

Passengers must complete the negative COVID 19 PCR test confirmation **upon arrival** or undergo a mandatory 14-day quarantine. The test result must have been issued within 72 hours of arrival in Boston. Passengers who were not able to take a COVID 19 PCR test before arrival can present a negative test result within the 14-day period to satisfy the mandatory quarantine rule. Effective 1 August 2020, all passengers travelling to Boston except the transit passengers connecting through Boston onto another flight, passengers travelling to Boston for medical treatment, children below 10 years old travelling with a parent or guardian, and flight crew must fill out the Massachusetts Travel Form.

Travel to New York (JFK)

Effective 28 September, all passengers travelling to New York, with the exception of 31 countries, must complete the online New York State Department of Health Traveller Form and **must quarantine for 14 days**. Passengers who have travelled outside of New York for more than 24 hours must test for COVID 19 within **72 hours** prior to their arrival in New York, and quarantine according to Department of Health guidelines, for a minimum of three days, measured from time of arrival, and take a diagnostic test on day 4 to exit quarantine.

Travel to Los Angeles

Effective 25 November, all passengers travelling to Los Angeles, must complete the California State Department online traveller form. Passengers under the age of 16 years and those transiting Los Angeles (who will not stay in the City of Los Angeles) are not required to fill out the online traveller form. All passengers travelling to Los Angeles, from other states or countries, including returning California residents **must quarantine for 14 days**.

Travel to Brazil

Travelers from ALL countries are permitted to enter Brazil under regular visa requirements. Effective 2 October, there are no restrictions for passengers travelling to Brazil. Travelers are **NOT required to quarantine for 14 days** when arriving in Brazil. Travelers are **NOT required to present proof of a negative COVID-19 test**. However, foreign nationals must present proof of valid health insurance that provides coverage during the period of their stay, unless they are students attending Brazilian institutions or Brazilian residents.

Travel to Ireland

All passengers arriving in Ireland from overseas, including Irish citizens, must complete a COVID 19 **Passenger Locator Form 48 hours before their arrival**. All travelers to Ireland are recommended to self-isolate for 14 days from arrival. The public health measures that apply to all of the population in Ireland, will also apply to all arriving passengers. In line with the EU traffic lights approach, there are no entry restrictions on travelers from green regions. Passengers entering Ireland from red, orange and grey regions are requested to restrict their movements for 14 days. With effect midnight 29 November passengers arriving from an "orange, "red" or "grey" region can end their period of restricted movement if they receive a negative / 'not detected' result of a Polymerase Chain Reaction (PCR) test taken a minimum of five days after their arrival in Ireland.

United Kingdom

All persons (including UK nationals) must fill in a "Public Health **Passenger Locator Form**" online to provide their journey and contact details no more than 48 hours prior to departure for the UK. This policy does not apply to persons arriving from Ireland, the Channel Islands, or the Isle of Man. Upon arrival, all persons need to self-isolate for up to 14 days, depending on where you've travelled from.



2.6 Long-haul and Transiting Traveller's PCR Test Requirements in Some Countries

The spread of the COVI-19 virus by infected travellers across international borders is of great concern. The WHO recommends countries to conduct a continuous and thorough risk assessment as they resume international travel to help identify, mitigate and reduce the potential importation or exportation risks. Even though it is believed that the risk of inflight transmission is very low, there is need to look at the issue of PCR tests issued to long-haul and transiting travellers.

The following are examples of countries with different requirements for transiting passengers concerning the COVID-19 PCR tests:

Ghana
Passengers who will be transiting through other countries before arriving in Ghana, the first country of departure will be the reference point. Passengers transiting and transferring through Accra will **not be required to take the COVID 19 PCR test** in Accra, if they are connecting on the same day and proceeding straight to the transit area for boarding. Passengers who are connecting on the next day are required to undergo the COVID 19 PCR test in Accra and then clear immigration. Transit passengers will be required to adhere to COVID 19 testing requirements for the destination countries.

Senegal
Passengers connecting through Senegal must fulfil the required conditions of their destination.

South Africa
Transit travellers through South Africa by air will be allowed to connect to their destinations, subject to them complying with applicable health protocols.

France
Passengers transiting through CDG to travel to a third country within **24 hours** are not required to present a COVID 19 PCR test certificate provided they do not exit the airport.

Egypt
Transit passengers (who are not entitled to hotel accommodation and will be staying at Cairo Airport till their onward flight) **don't require to have PCR test upon arrival**. Transit passengers (who are entitled to hotel accommodation and will not be staying at Cairo Airport till their Onward flight) must be in possession of a negative PCR test even if their final destination doesn't require a negative PCR test.

Rwanda
All Passengers including those in transit, will be required to **show proof of a negative PCR** (RT-PCR) test certificate by an ISO certified laboratory.

United Arab Emirates

From August 1, 2020, persons arriving in (or transiting through) Abu Dhabi must carry proof of a negative result for COVID-19 issued no more than **96 hours** prior to departure using a polymerase chain reaction (PCR) test.





Conclusion

3.0 Conclusion

The covid-19 pandemic has triggered an unprecedented crisis in the tourism industry in Kenya and the latest figures released by the Kenya Tourism Board (KTB) show that this year Kenya has missed out on earning over Kes 100 billion in direct tourism income which has been lost as a result of global tourism closing down during the pandemic. Following the directive by H.E. the President of Kenya that international flights could resume from 1st August 2020, effective protocols have been implemented by the tourism sector to ensure the safety of overseas visitors and Kenyans alike. These measures have created reassurance and have been extensively praised by all our recent visitors.

Tropical Beach Tourism and Safari Tourism give Kenya enormous competitive advantages that sets us apart and which can attract millions of international customers flying in from overseas since very few other countries can offer this product and it is something that visitors from all over the world love to experience. As long as we are adequately served with incoming flights by many of the leading international airlines; have well-functioning modern international airports; good quality accommodation for tourists; prices that are affordable for the market that we are seeking to attract; and safety / security for visitors after arrival, then our beach and safari attractions can be a huge draw especially during the current period when Kenya's low level of Covid-19 mortality at under 30 deaths per million is so much lower than in our key source markets.

Our two biggest source markets this year have been North America (USA / Canada) and the United Kingdom which between them account for over 25% of all incoming visitors to Kenya so far this year. With the announcement by the UK government that from 2nd December residents of England can travel overseas again and as US citizens are also free to travel, we have the opportunity now for the tourism industry to resume business and to contribute to the recovery of Kenya's economy as well as providing livelihoods and incomes for Kenyans, while strictly adhering to the laid down protocols.

To encourage visitors to start coming back in increasing numbers, the key thing is not only to reassure potential visitors that they are not at risk in Kenya and that protocols are being followed, but most of all **to make it easier for people to come to Kenya and that means changing the requirement for a PCR test certificate** to have been taken 4 days (96 hours) before arrival at JKIA. That means the validity period of the PCR Test Certificate must be lengthened by a few days or even dropped altogether. It is very difficult for many people to have the test carried out and obtain the results and then travel and arrive in Kenya, all within 96 hours. If this period could be extended to at least 10 days (240 hours) or ideally 14 days then it would make a big difference in enabling tourism inflows to increase.

To make it easier for people to come to Kenya … means changing the requirement for the PCR test certificate… from 96 hours to 14 days.

Reviewing the requirements of other countries, it seems that several require arriving visitors to have a negative PCR test certificate but with differing validity periods from **3 days (72 hours) to 10 days for Malawi, 14 days for Zambia,** whereas other countries such as Tanzania have **no requirement** for a PCR test certificate and rely on their own screening of arriving visitors:

1. Countries requiring a PCR test made **3 to 4 days** before checking in for flight to the country or in some cases before arrival in the country include: Botswana, Egypt, Gambia, Kenya, Madagascar, Mozambique, Namibia, Seychelles, South Africa, Uganda.
2. Others give a longer period of validity for the PCR certificate for instance: Ethiopia (**5 days** before boarding flight to Ethiopia); Malawi (**10 days** before entry to Malawi); Mauritius (**7 days** before departure flight to Mauritius); Rwanda (**5 days** before first flight to Rwanda); Zambia (**14 days** prior to arrival in Zambia) and
3. Tanzania has **no requirement** for a PCR test for the mainland or for Zanzibar but carries out screening on arrival.

It is clear that a negative PCR test does not exclude the possibility that the person tested may become infectious in the days prior to departure or during travel (on board, or at the destination). This is because the incubation period for the COVID-19 virus on average take **5-6 days** but can take up to **14 days**. This means that a person may undertake a pre-departure testing and test negative but be in the incubation period and later become positive after arrival and hence could end up infecting others. So, if someone is tested less than **4 days** before arrival as presently required, they would still have about as much chance of being in the incubation period and becoming positive later as someone who was tested and waited **7-14 days** before travelling to Kenya. Bearing in mind that someone who develops symptoms is unlikely to travel anyway and would still be screened on arrival, it would seem that there is no real increase in risk by allowing the validity period to be increased from **4 days to 10 days**. Hence the PCR requirement could be amended so that visitors to Kenya are required to present a PCR certificate showing that they have tested negative within a period of up to **14 days before arrival in Kenya**, on similar lines to Zambia.



4.0 References

Baggett, T. P., Keyes, H., Sporn, N., & Gaeta, J. M. (2020). Prevalence of SARS-CoV-2 infection in residents of a large homeless shelter in Boston. Jama, 323(21), 2191-2192.

Centers for Disease Control and Prevention (2019). Novel Coronavirus (2020) https://www.cdc.gov/coronavirus/2019-ncov/about/transmission.html

European Centre for Disease Prevention and Control - ECDC (2020). COVID-19 situation update worldwide, as of week 50 2020. https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases

Han, E., Tan, M. M. J., Turk, E., Sridhar, D., Leung, G. M., Shibuya, K., ... & Cook, A. R. (2020). Lessons learnt from easing COVID-19 restrictions: an analysis of countries and regions in Asia Pacific and Europe. The Lancet.

IATA (2020). Reopening borders through Rapid COVID Testing. https://www.iata.org/contentassets/5c8786230ff34e2da406c72a52030e95/iata-position-covid19-testing.pdf

Lauer, S. A., Grantz, K. H., Bi, Q., Jones, F. K., Zheng, Q., Meredith, H. R., ... & Lessler, J. (2020). The incubation period of coronavirus disease 2019 (COVID-19) from publicly reported confirmed cases: estimation and application. Annals of internal medicine.

Nishiura, H., Kobayashi, T., Miyama, T., Suzuki, A., Jung, S. M., Hayashi, K., ... & Linton, N. M. (2020). Estimation of the asymptomatic ratio of novel coronavirus infections (COVID-19). International journal of infectious diseases, 94, 154.

Sharun, K., Tiwari, R., Natesan, S., Yatoo, M. I., Malik, Y. S., & Dhama, K. (2020). International travel during the COVID-19 pandemic: Implications and risks associated with 'Travel Bubbles'. Journal of travel medicine.

Top factors travellers will consider before planning a trip – what hard-hit countries can consider. https://www.weforum.org/agenda/2020/07/top-factors-travellers-will-consider-post-covid-19-what-hard-hit-countries-can-consider.

UNWTO (2020a). Tourism and COVID-19. https://www.unwto.org/tourism-covid-19 coronavirus. Updated on 27.3.2020. Madrid, Spain.

UNWTO (2020b). https://www.unwto.org/more-than-50-of-global-destinations-are-easing-travel-restrictions-but-caution-remains.

World Health Organization. (2020). Novel Coronavirus (2019-nCoV) Advice for the Public. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public.

World Health Organization. (2020a). Coronavirus disease 2019 (COVID-19) Situation Report 73. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200402-sitrep-73-covid-19.pdf

Zou, L., Ruan, F., Huang, M., Liang, L., Huang, H., Hong, Z., ... & Guo, Q. (2020). SARS-CoV-2 viral load in upper respiratory specimens of infected patients. New England Journal of Medicine, 382(12), 1177-1179.7.



Report by:

Global Tourism Resilience & Crisis Management Centre (GTRCMC) Eastern Africa

GTRCMC – EA

Kenyatta University

P O Box 43844 – 00100

Nairobi, Kenya

Email: gtrcmc@ku.ac.ke

Website: http://www.ku.ac.ke/gtrcmc

In collaboration with:

Kenya Tourism Federation

KWS Complex, Langata

P.O Box 15013 - 00509.

Nairobi, Kenya

Need Help? Call KTF 24Hr Tourist Helplines

+254 (0)20 6004 767

+254 (0)20 8001000

+254 (0)722 745 645

+254 (0)20 2679838

Ministry of Tourism & Wildlife

NSSF Building, Block A
15th Floor, Eastern Wing.
P.O. Box 30027, Nairobi
+254-020-2724646