



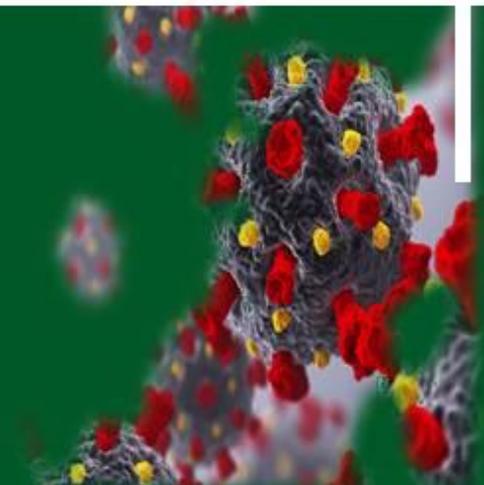
African Union



African Scientific
Research and
Innovation Council



COVID-19 Pandemic & African Scientific, Research and Innovation Council's Response





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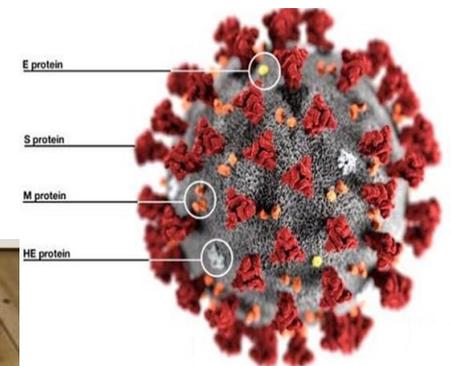
This presentation was prepared on 2nd April, 2020 and will be updated soon

The corona virus 2019



African Scientific
Research and
Innovation Council

- Coronavirus disease 2019 (covid-19) is a new pathogen of previously known virus and is defined as illness caused by a novel coronavirus now called severe acute respiratory syndrome coronavirus 2. It was first identified amid an outbreak of respiratory illness cases in Wuhan city, hubei province, China.
- **Structure** - spherical or pleomorphic enveloped particles containing single-stranded (positive-sense) RNA associated with a nucleoprotein within a capsid comprised of matrix protein.
- **Pathogeneses** - Transmission is usually via airborne droplets to the nasal mucosa. The virus replicates locally in cells of the ciliated epithelium, causing cell damage and inflammation.
- **Control** – Symptomatic treatment of common colds: **no vaccines or specific drugs are available. Hygiene measures reduce the rate of transmission.**



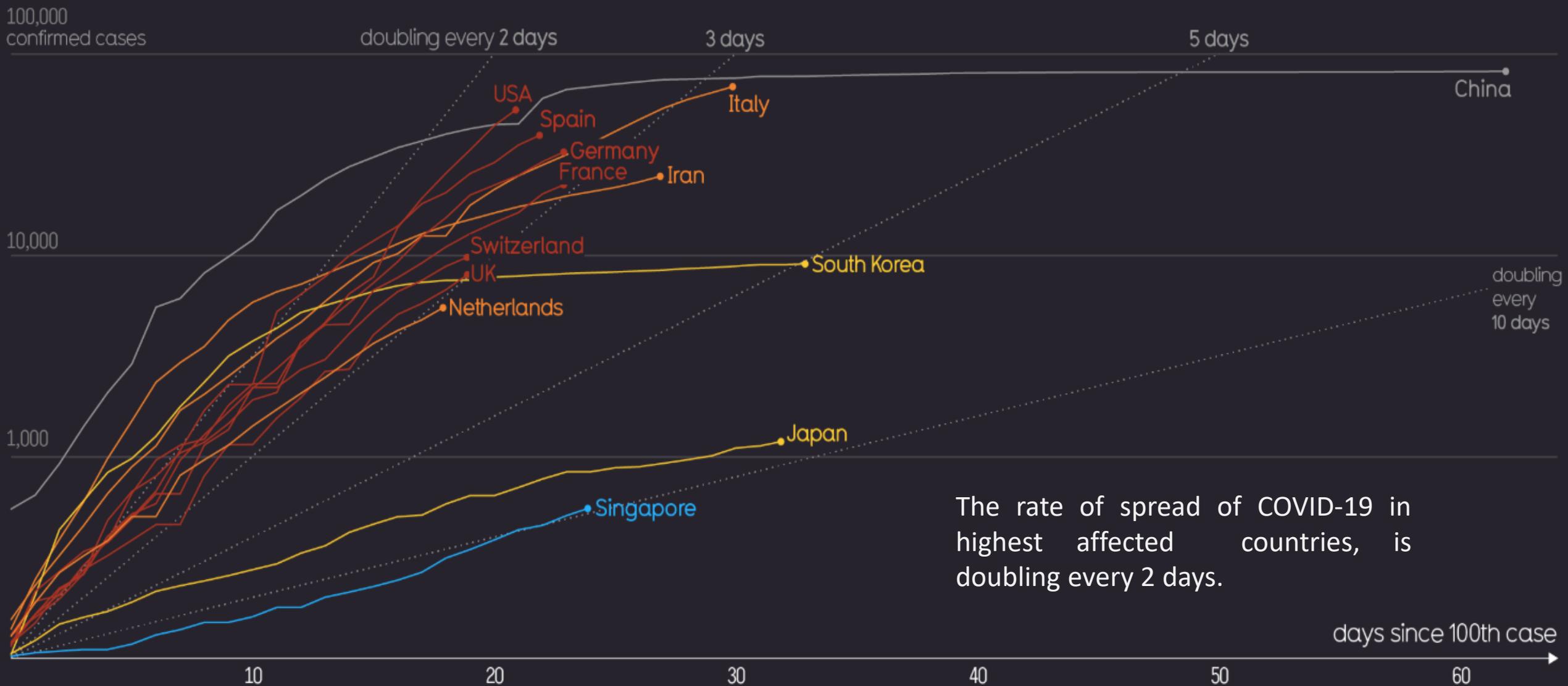
Global Impact of COVID-19

- Since the beginning of the pandemic in 29 December 2019 Chinese authorities identified a cluster of similar cases of pneumonia in the city of Wuhan.
- On 11th March 2020 , WHO declares the COVID-19 Pandemic as of the disease spread to the world reaching more than 118,000 cases and 4,291 lives lost.
- Since then the disease gradually spread to the world reaching more than 800,000 cases and 39,104 lost of lives.

Coronavirus Infection Trajectories

updated 26th Mar 2020

Growth of outbreaks



The rate of spread of COVID-19 in highest affected countries, is doubling every 2 days.

The Manifold Impact of COVID-19

Impact on Trade

- Companies that have come to rely heavily on trade with China in the past four decades have been hit hard According to WEF China accounted for about \$4 trillion in manufacturing “value added” exported to the rest of the world
- according to World Bank data - and the country is home to seven of the ten busiest container ports in the world
- January-February 2020 period when the number of confirmed cases in the country was rising sharply, reflect declines in domestic factory output (by 13.5% compared with the period a year earlier). Companies that bring goods from China to the rest of the world have had to reduce the number of vessels in operation due to lowered demand
- Trade shows and conferences have also been severely impacted by cancellation and attendances
- As more aspects of global commerce are affected by COVID-19, the effects are likely to spread further - prompting a need for more responsive action from international organizations and central banks.

Impact on Travel

- Demand for air travel evaporated and new border controls emerged as the coronavirus spread
- Roughly one million Chinese tourists had been visiting Bali every year before the spread of COVID-19 reduced outbound travel from the world's second-biggest economy to a relative trickle.
- in Australia, for example, Chinese tourists were estimated to have spent AUD \$11.5 billion in 2019 alone, while in Switzerland Chinese tourists accounted for about one-fifth of the international tourists visiting the cities of Lucerne and Bern.
- Roughly a few months after the coronavirus was first detected, a European Union official announced that Europe's tourism industry was losing €1 billion per month due to the decrease in arrivals from China.
- As the coronavirus spread globally, its impact on travel and tourism only broadened - as more would-be travelers stayed home and public officials tried to prevent outbreaks.
- On 11 March US President Donald Trump abruptly announced a ban on travelers from dozens of European countries

Impact on Food and Agriculture

- Before COVID-19, 113 million people in the world were already struggling with severe acute food insecurity due to pre-existing shocks or crises. Presently the number has increase making them less equipped to fend off the virus. Recalling that in Ethiopia, Kenya, Somalia nearly 12 million people already found themselves in dire circumstances as a result of extended severe droughts and back-to-back failed harvests before hordes of desert locusts descended on their crops and pastures in late December/early January.
- Rural people feed the urban and they depend on agricultural production, seasonal jobs in agriculture, fishing, or pastoralism. If they become ill or constrained by restrictions on movement or activity, they will be prevented from working their land, caring for their animals, going fishing, or accessing markets to sell produce, buy food, or get seeds and supplies.
- These people have very little to fall back on. They could find themselves forced to abandon their livelihoods. By selling off their animals or their fishing boat for cash or eat all of their seeds instead of saving some to replant.
- Presently there are challenges of food movement from areas of food secured to unsecured nations. There are also reported cases of food price hike in some places due to high demand

Impact on Education

- As of March 28, 2020, the COVID-19 pandemic is causing more than 1.6 billion children and youth to be out of school in 161 countries. This is close to 80% of whole enrolled students.
- According to World Bank's " Learning Poverty" indicator – the percentage of children who cannot read and understand at age 10 – stood at 53% of children in low- and middle-income countries – before the outbreak started. This pandemic has the potential to worsen these outcomes even more if we do not act fast.
- *The global lockdown of education institutions is going to cause major interruption in students' learning; disruptions in internal assessments; and the cancellation of public assessments for qualifications or their replacement by an inferior alternative.*
- home schooling is not only a massive shock to parents' productivity, but also to children's social life and learning
- Teaching is moving online or by radio on an untested and unprecedented scale. Student assessments are also moving online, with a lot of trial and error and uncertainty for everyone. This is not possible for Africa where there are thousands of schools that don't have ICT infrastructure.

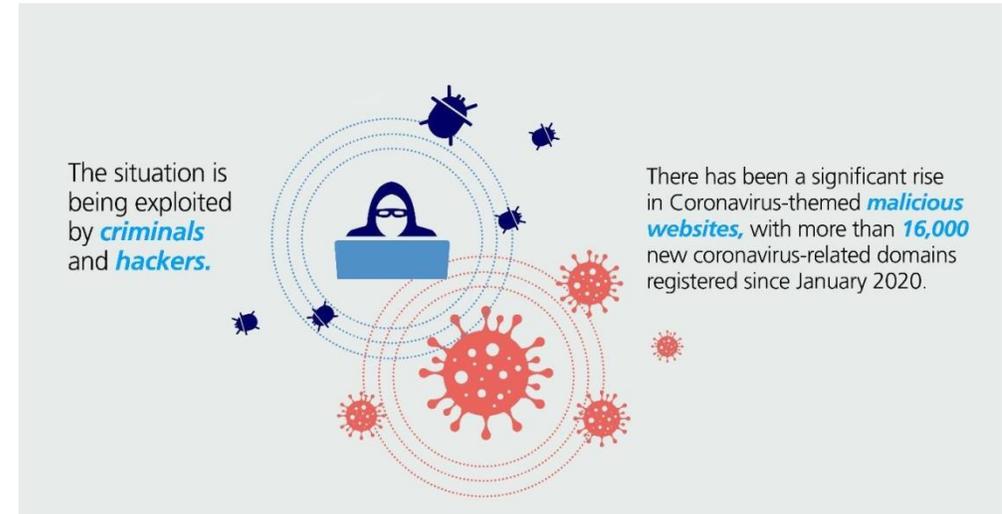
Impact on Financial Markets

- In mid-March, the Dow Jones Industrial Average, a measure of 30 of the most prominent publicly traded stocks in America, registered its second-worst day of trading in its 124-year history.
- In Europe, Britain's FTSE 100, France's CAC 40, Switzerland's SMI, and Germany's DAX also took coronavirus-related hits.
- In Asia, on 13 March Japan's Nikkei 225 Index recorded its sharpest one-day drop since April 1990.
- Bond prices also declined sharply amid the turmoil, while gold - usually a safe haven for investors - declined in value.
- As markets were knocked off balance, expectations increased for policy-makers to step in and start implementing stimulus measures aimed at safeguarding global growth

Impact on Workforce

- The coronavirus is keeping employees away from offices and factories, and triggering furloughs and layoffs
- In early March, United Airlines asked employees to volunteer for an unpaid leave of absence or sign on for a reduced schedule - underlining COVID-19's impact on the airline industry specifically.
- organizations have to reckon with a new reality where they cannot support the number of employees they could previously, or simply cannot expect employees to take daily commutes in ways that may put them at increased risk of exposure to the coronavirus.
- As more people have begun working at home, interest in video-conferencing software has spiked.
- In Washington, one of the first US states to cross the threshold of 100 confirmed cases, firms including Amazon, Microsoft, and Google asked Seattle-area staff to work from home - even before gatherings of more than 50 people were temporarily banned in the area.
- Meanwhile in China, still home to a significant portion of all confirmed COVID-19 cases as of March, the economic slowdown triggered by the outbreak has caused many companies to implement pay cuts and layoffs

Media Impact



- Hackers are selling malware and hacking tools through COVID-19 discount codes on the dark-net, many of which are aimed at accessing corporate data from home-workers' laptops, which may not be as secure as outside an office environment.
- The webs are afloat with numerous information on COVID-19 some are true but many are false.
- The populace are sometimes find it difficult to know which is true or false.

CURRENT SITUATION IN AFRICA

- In Africa, the virus has spread to dozens of countries within weeks. Governments and health authorities across the continent are striving to limit widespread infections. The situation is evolving hourly on the situation of things on COVID-19 in Africa.
- AUC and partners continue to monitor and provide technical and operational support to Member States to scale up the response in affected countries and enhance readiness in the rest of the region.
- Basic preventative measures by individuals and communities remain the most powerful tool to prevent the spread of COVID-19 including advocacy campaign on the control.
- AU Member States and Partners are trying to pull resources to assist in containment, prevention and management of the COVID-19.
- Total infection confirmed cases in Africa stands at 2412 with RSA 709, Egypt 402, Algeria 264, Morocco 170, Tunisia 114, Burkina 114, Ghana 53 among others but there are no infected cases in Burundi, Comoros, Lesotho, Malawi, Sao Tome and Principe, Sierra Leone, and South Sudan with total death of 64. There are 43 Countries with positive cases, 14 countries with deaths with recoveries of 203 patients in 14 countries (this was developed on the 26 March data).

Economic Impact on Africa

- for Africa (ECA) warned the unfolding coronavirus crisis could seriously dent Africa's already stagnant growth with oil exporting nations losing up to US\$ \$65 billion in revenues as crude oil prices continue to tumble
- Many countries buy natural resources from Africa but due to reduced demand, countries that rely on oil and other natural resources saw their exports drastically reduced.
- could reduce Nigeria's total exports of crude oil in 2020 by between US\$ 14 billion and US\$ 19 billion.
- Africa may lose half of its GDP with growth falling from 3.2% to about 2 % due to a number of reasons which include the disruption of global supply chains
- With nearly two-thirds of African countries being net importers of basic food, shortages are feared to severely impact food availability and food security.
- Africa would need up to US\$ 10.6 billion in unanticipated increases in health spending to curtail the virus from spreading, while on the other hand revenue losses could lead to unsustainable debt
- COVID-19 pandemic leading to even worse outcomes as tourism and business trips have mostly stopped globally due to travel restrictions, which will take months with all major economies facing a recession, copper and oil are already trading at their lowest prices since 2016.
- Remittances are impacted with those in the diaspora subjected to national restrictions.
- Due to China's economic restrictions, traders accros Africa are struggling to get access to the wide range of goods.

Prospects

- The intra-African market taking advantage of AfCFTA could help mitigate some of the negative effects of COVID-19 through limiting dependence on external partners, especially in pharmaceuticals and basic food (African countries who export drugs to prioritize selling on the African market)
- Member States to provide incentives for food importers to quickly forward purchases to ensure sufficient food reserves in key basic foods items.
- Because of the impending recession due to global economic slow down, Members States to cut interest rate to zero to encourage lending
- Member States who borrowed fund from World Bank, IMF Paris Club among others to seek for debt waivers and reduction of interest rates.
- Setting up African Medical Volunteer front that can be mobilized to assist any Member State that is in great danger
- From the lesson learnt on COVID-19 Africa should always looks inwards to rely on solving its challenges than outward. Because it has the capacity and the know-how



Continental Policies and Institutional landscape to assist in Africa's recovery from COVID-19

- **Overarching Continental framework AU Agenda 2063 and its aspirations**
- The African Health Strategy 2015-2030 : infectious diseases containment, infrastructure, human capital development and resource mobilization for health sector development.
- African Pharmaceutical and Manufacturing Plan – spells the development of Africa pharma group, licensing, technology, drugs and others
- Science, Technology and Innovation Strategy for Africa (STISA 2024) – research, training and technological component of health
- African Union Framework for Detection, Identification and Monitoring of Infectious Diseases of Humans, Animals and Plants – this gives an impetus to ACDC, RCDC, NCDC
- Research Translation Guideline – critical component of translating research outcome (from bench to bedside) -
- Africa Centre for Disease Control (ACDC) – established disease control institutions
- African Scientific, Research and Innovation Councils – highest advisory body on STI to the AU

Africa CDC

- Africa CDC strengthens the capacity and capability of Africa's public health institutions as well as partnerships to detect and respond quickly and effectively to disease threats and outbreaks, based on data-driven interventions and programmes.
- It provides capacity building, coordination, guidelines, policies and recommendations for Member States on;
 - Surveillance
 - Laboratory
 - Risk Communication
 - Recommendation

Research on COVID-19

- In view of the urgency of this outbreak, the international community, AU Member States are mobilising to find ways to significantly accelerate the development of interventions.
- World experts on COVID-19 met at the WHO on 11 - 12 February 2020 to assess the current level of knowledge about the new virus, agree on critical research questions that need to be answered
- Topics of Research may includes- virus: natural history, transmission and diagnostics; animal and environmental research on the virus origin, and management measures at the human-animal interface, epidemiological studies; clinical characterization and management, infection prevention and control, including health care workers' protection; candidate therapeutics R&D; candidate vaccines R&D; ethical considerations for research and; integrating social sciences in the outbreak response.
- There are many funds readily available across the globe to fund these research including AU Member States but key factors to be considered;
 - Institutional Strength
 - Equipment and infrastructure
 - Human capacity
 - Experience and pedigree

THE ASRIC Strength

- Since the ASRIC establishment by Executive Council Decision (EX.CL/Dec.747 (XXII)) is promoting scientific research and innovation in order to address the challenges of Africa's socio-economic development;
- ASRIC has a database of about 4,000 Medical/Biological scientists across AU Member States;
- ASRIC has easy access to and can network with other relevant health institutions across AU Member States;
- The Rules of procedure of ASRIC is free from bureaucracy (it can approve its operational budget which gives it an autonomy); and can easily mobilize and dispatch resources to serve Africa;
- ASRIC has credible controlling measures and systems since its bounded by the AU financial, audit & procurement system;
- ASRIC is very well experienced in coordinating research in AU Member States;
- The existence of a Research Translation Guidelines is an advantage; and
- Commitment of ASRIC Bureau & Secretariat to the ASRIC mandate

What ASRIC Can Do?

Rapid STI Interventions

- constituting an ASRIC Advisory Board on STI Intervention for Covid-19 composed of Member States (RSA, Nigeria, Egypt, Morocco, Tunisia, Algeria, Kenya, Tanzania, Cameroon, Zambia)
- Creating a Network of Bio-Safety Level 4 & Bio-Safety Level 3 Laboratories to host African scientists to carry out research on epidemiology, diagnosis and treatment of Covid-19
- Assemble a Research Team to work on understanding the features of Covid-19 and quest for novel treatment and vaccine.
- Assemble a Research Team to work on the identification and testing the efficacy of existing potential drugs for clinical trials for treatment of Covid-19.
- ASRIC would launch a grant to support all activities that address Covid-19 challenges.

Educating communities; Educating health workers (occupational health)

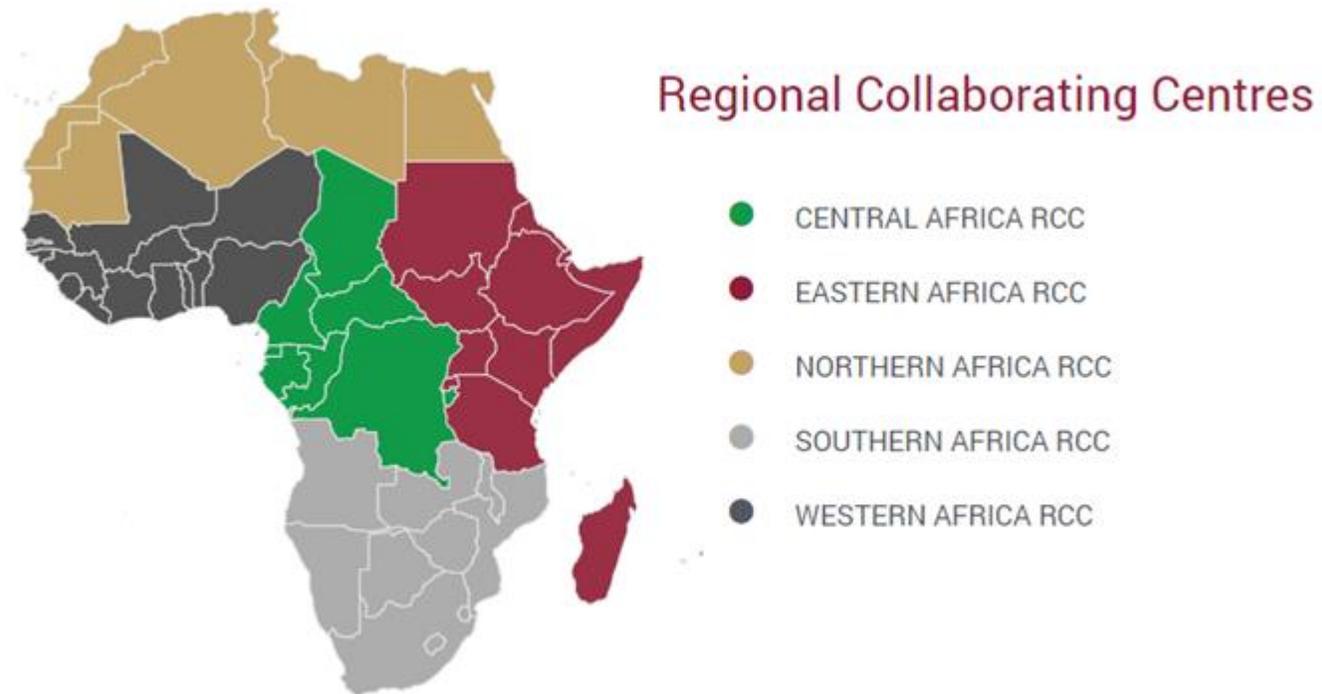
There are many existing interventions in this regard, however, the ASRIC will keep observing if need be for new information with new dimensions is needed, ASRIC will intervene accordingly.

Establishment of a platform for sharing experiences & knowledge on Covid-19

Leveraging on our rich network/database of medical scientists across AU Member States, ASRIC can establish a platform for sharing real-time situation and issues ongoing in various Member States affected by Covid-19. Such information is necessary to assist the researchers working in laboratories to have accurate knowledge of the African situation, challenges and opportunities.

Stakeholder Analysis

- African Centre for Disease Control and Prevention ACDCP
- Regional Centre for Disease Control
- National Centre for Disease Control



Cont. Stakeholder Analysis

- BSL 4 and BSL 3 Laboratories
- National Research Institute (health, medical and pharmaceutical)
- Ministry of Health
- Ministry of STI
- National and Private Pharmaceutical Companies
- National Drug Regulatory Authorities



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