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#### **INTRODUCTION**



Human society and cities can suffer numerous crises at any moment, such as Floods, Earthquakes, Tsunamis, Volcanic Eruptions, Fires, and Environmental Pollution. As human minimizing biodiversity by global deforestation, to make way for building infrastructure, agriculture and intensive livestock farming, the caused bring wildlife closer to humans, increasing the risk of disease pandemics such as COVID – 19.

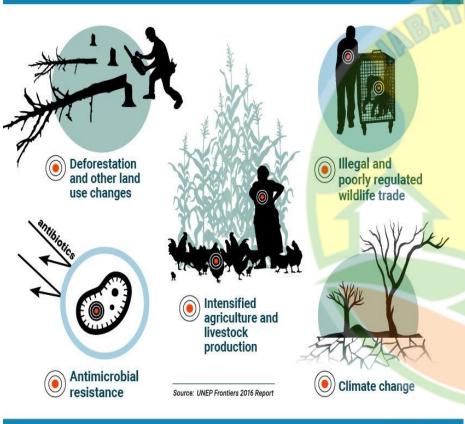
The COVID-19 pandemic has caused an unprecedented human and health crisis. As of 17<sup>th</sup> February 2021, 109 million confirmed cases of COVID-19 have been identified by the WHO globally, with 269,000 occurring in Malaysia, including 2,998 active cases daily, and 983 deaths.



#### **INTRODUCTION**

What factors are increasing zoonosis emergence?

(Diseases transmitted from animals to humans)



Animals to Human = "Zoonoses"

#### **Zoonotic Diseases:**

- ✓ Environmental changes
- ✓ Ecological disturbances : Agricultural Intensification and Human Settlement
- ✓ Encroachments into forests and other habitats

covidence of an infected person when they are inclose contact with another individual.

The virus can spread into small liquid particles from the mouth or nose of an infected person when they speak, cough, sneeze, or breathe heavily.

Little attention has been paid to the adverse effects on Mental-Wellbeing or Successful Prevention Measures to strengthen Mental Health during this crisis.

### #COVID19



Source: Self-harming – how deforestation drives emerging diseases and pandemics such as coronavirus - EIA (eia-international.org)

### WHAT IS IMBROGLIO CRISIS?

Borrowed from Italian 'Imbroglio' ("Tangle, Entanglement, Muddle")

- An <u>unwanted</u>, <u>difficult</u> and <u>confusing situation</u>, <u>full</u> of <u>trouble</u> and <u>problems</u>
- Complexity, complication and difficulty.

'Common emotional responses during this pandemic crisis were debilitating fear of contagion, isolation that can induce feeling of loneliness, anxiety, uncertainty, depression, frustration and fear, boredom and social isolation, as well as a lack of outdoor activity. It has amplified significantly more severe mental health problems which the effects are last much longer than the health effects'.......



### **CAUSES OF IMBROGLIO CRISIS?**

## 01 QUARANTINE

### **QUARANTINE =**

Derived from the Italian words *quaranta giorni* which mean 40 days. The practice of quarantine is began during the 14th century in Venice, in order to protect coastal cities from plague epidemics

- The separation and restriction of the movement of persons that might have been exposed to an infectious disease in order to determine whether they are unwell, thus decreasing the possibility of infecting others.
- Always an uncomfortable experience, for those who endure it. Separation from loved ones, loss of independence, confusion about disease status, and boredom can generate drastic impacts.







### STRESSORS DURING QUARANTINE

## a Duration of Quarantine

Three research found that longer quarantine durations were directly linked to poorer mental wellbeing, symptoms of post-traumatic stress, avoidance habits, and frustration.



## Fears of Infection

Participants in eight studies expressed fears about their own health or fears of infecting others and were more likely than those not quarantined to fear infecting family members.

They were also particularly worried if they encountered any physical symptoms possibly related to the infection and were afraid that the symptoms could indicate the persistence of the infection several months later to be related to psychological outcomes.

### STRESSORS DURING QUARANTINE



## Frustration and Boredom

Confinement, lack of daily routine, and decreased social and physical interaction with others have often been shown to cause participants to be disturbed by boredom, dissatisfaction, and a sense of alienation from the rest of the world. This frustration was exacerbated by not being able to take part in regular day-to-day tasks.







## Inadequate Information

Many respondents cited inadequate public health knowledge as a stressor, reporting insufficient clear guidance on measures to be taken.

### STRESSORS POST QUARANTINE

## a) Finances

Can be an issue with people unable to work and having to interrupt their professional activities with no advanced planning. Caused significant socioeconomic deprivation in the examined studies and was found to be a risk factor for symptoms of psychiatric disorders, frustration and anxiety



## Stigma

Quarantined participants were much more likely to report stigma and rejection from individuals in their local communities, suggesting that there is stigma specifically surrounding people who had been quarantined.

Participants indicated that they were viewed differently by others: ignoring them, withdrawing social invites, treating them with fear and mistrust, and making negative remarks.

## 02 ISOLATION

The public health effect of COVID-19 created a global situation that continues to force many people to stay at home and avoid near contact with others. Naturally, anxiety and confusion surround sudden health authorities' orders to drastically alter people's social lives and how people use their local urban spaces.

Facing uncertainties in the employment, education and having to adapt to sudden changes related to the movement restriction, and even obtaining daily provisions or food supplies can be "very stressful, especially in more remote areas.



# 02 ISOLATION

It is well known that social isolation between older adults becoming a "serious public health concern" due to their higher risk of cardiovascular, autoimmune, mental wellbeing and neurocognitive issues. Social disconnection puts older adults at increased risk of anxiety and depression (Armitage et al., 2020)

A point of view article published in the Journal of the American Medical Association states that there is also concern that loneliness could be more difficult for older people during the pandemic, which may worsen current mental health problems.



# ECONOMIC HARDSHIP AND BUSINESS-CLOSURE

**Stress and anxiety** resulting from household confinement conflicts (e.g. domestic violence) as well as an **economic recession triggered by a pandemic that often results in involuntary jobs and loss of income** could turn into a full-fledged mental health crisis (Lu Dong et al., 2020).

Research from prior economic downturns shows that job loss is related with increased depression, anxiety, distress, and low self-esteem and may contribute to higher rates of suicide and drug use disorder.

Unemployment has weakened job stability and, as a result of this pandemic, economic hardships would have an effect on individual health and health care in general.







# 04

### **HEALTH WORKERS / FRONTLINERS**

Health-care workers who are directly involved in the diagnosis, treatment, and care of patients with COVID-19 are at risk of developing psychological distress and other mental health symptoms.

Studies showed that those health care workers feared contagion and infection of their family, friends, and colleagues, felt uncertainty and stigmatization, reported reluctance to work or contemplating resignation, and reported experiencing high levels of stress, anxiety, and depression symptoms.



## 5 SCHOOL CLOSURE AND LACK OF CHILDCARE

Research during the pandemic points to concerns around poor mental health and well-being for children and their parents, as many are experiencing challenges with school closures and lack of childcare.

Depression and anxiety among parents and carers have increased with the pressures of the lockdowns, as the parents are worried about their children's futures and not many parents found it easy to home school their children. Some have to quit their job to look after their children, as many day care centres and schools closed.

The ability for children to learn via e-learning or online classes is limited, primarily due to the lack of necessary equipment. A study involving more than 670,000 parents and 900,000 students found that about one-third do not own any devices



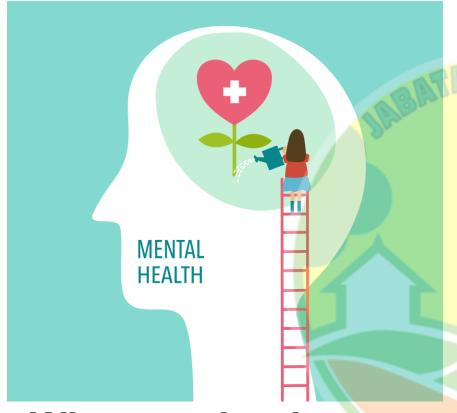
IMPACTS OF IMBROGLIO CRISIS DURING PANDEMIC

- Fear
- Depression
- Loneliness
- Boredom
- Anger and Anxiety
- Stigmatization
- A sense of Uncertainty
- Insomnia
- Irritability
- Alcohol abuse
- Domestic abuse / Domestic Violence
- Increased Rate of Child Abused
- Increased of suicide rates

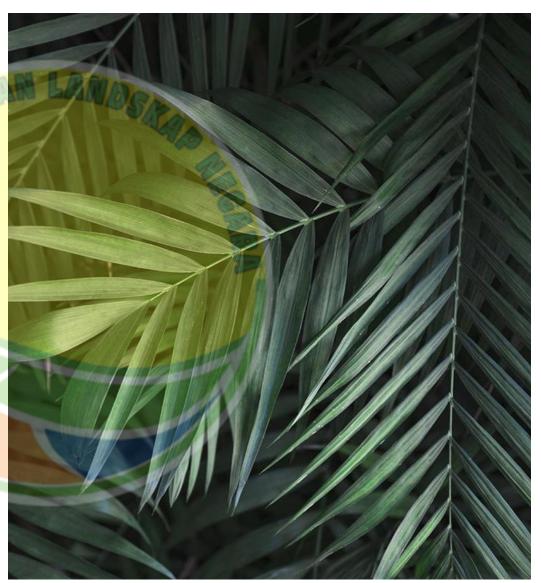
Note: 1) Sheltering in place with family members poses risks to well-being due to a drastic increase in domestic violence in many countries during the COVID-19 crisis (WHO, 2020a).

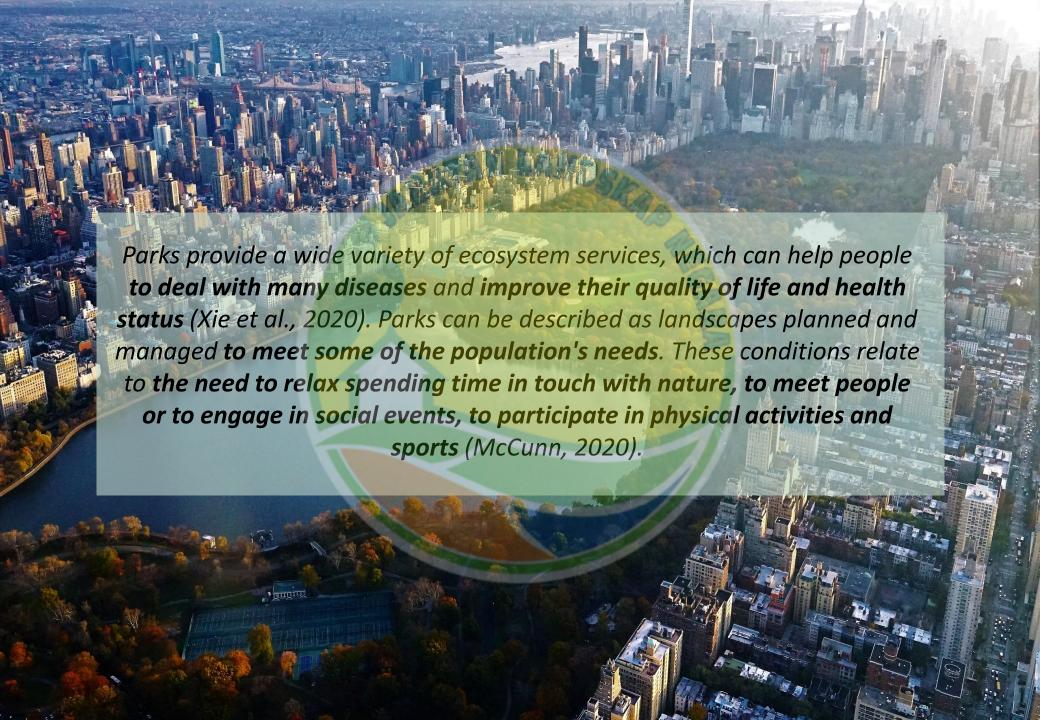
2) From March 18 to , a total of 266 people committed suicide from March 18 to Oct 31, an average of 30 cases a month, or one every day (Source: Grave crisis at hand? (thesundaily.my))

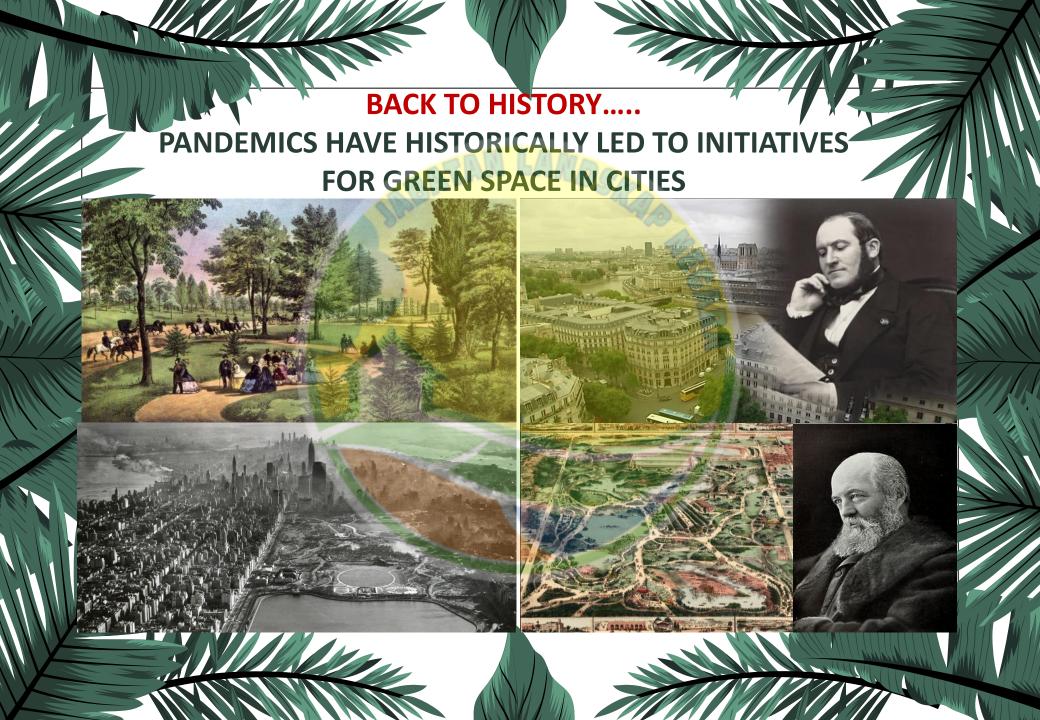




What can be done to mitigate the consequences of Imbroglio Crisis?







## BACK TO THE HISTORY: How pandemics prompted cities to create more green spaces for people.....

#### Cholera pandemic spurred the development of Central Park in New York

When cholera took the lives of 3,500 residents in a matter of weeks after it reached New York City in the summer of 1832, the disease was considered to be a result of unhealthy air and polluted water. Filthy streets of the city filled with human waste, and garbage produced dreadful odours known as "miasma" that were considered to be responsible for the spread of disease



The Cholera + Large Boulevards
Pandemic Response = + More Parks
'Central Park' as a lung in the city and
breathing space

**BACK TO THE HISTORY:** How pandemics prompted cities to create more green spaces for people.....

Public Health Influenced the Creation, Purpose, and Design of Central Park



The Board of Health of New York City made way for Central Park, the first public park in the country, on the premise that open urban space enhanced human and environmental health.



Landscape Architect Frederick Law Olmsted, advocated for the healing powers of parks, and believed 'Parks could act like urban lungs as "outlets for foul air and inlets for pure air. "He emphasized the importance of large open spaces to allow people to access fresh air and sunlight, and discusses how air could be 'disinfected' by sun and foliage,"

Parks was to provide "Opportunity and inducement to escape at frequent intervals from the confined and vitiated air of the commercial quarter"

-Frederick Law Olmsted-

**BACK TO THE HISTORY:** How pandemics prompted cities to create more green spaces for people.....

#### **Cholera Pandemic spurred the development City of Paris**



In Paris, a six-month Cholera outbreak in 183 precipitated not only the construction of that underground sewer system, but also new, wider streets and sidewalks, parks and squares.





### **The Cholera**

**Pandemic** 

+ Tree- Line Boulevards

+ More Parks and Squares

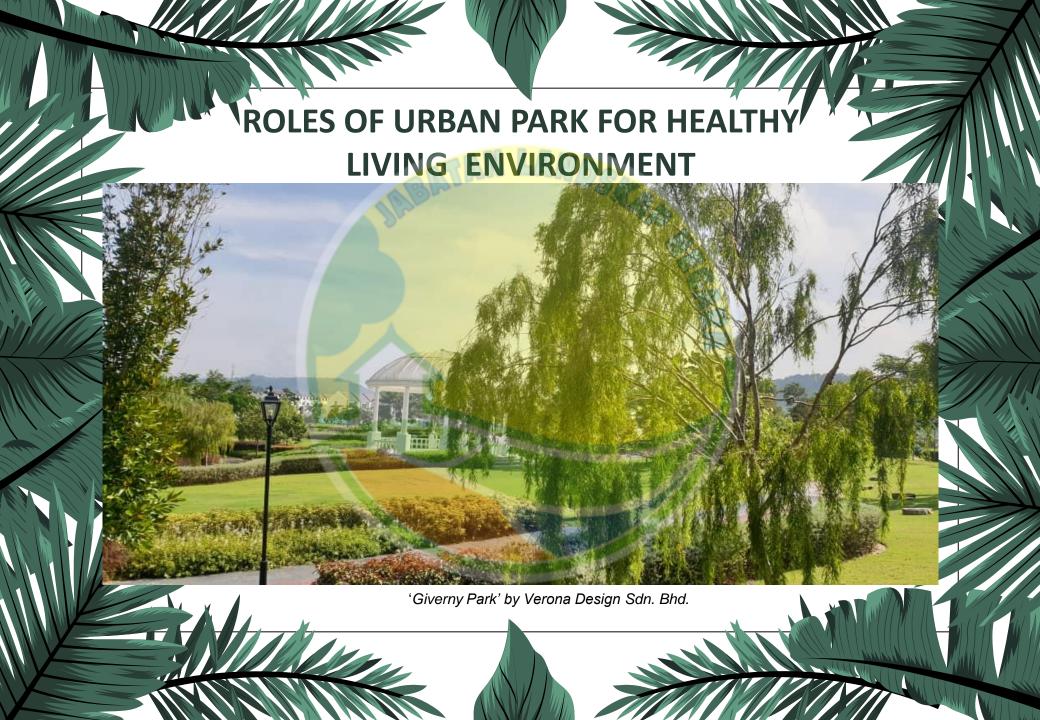
+ Wider Streets & Sidewalks

+ More Fountains Response =

+ Sewerage system

**Transformed Paris into the Modern "City of Light"** 

1853 Baron Haussmann was appointed by Napoleon III (An admirer of London's parks and garden **squares**) to essentially renovate and reimagine Paris through a vast public works program that brought light and air into the city centre.



# 01

## **Mental and Health Wellness**

Spending time in nature has been shown to reduce the response to human stress and increase physical and mental health (Collado et al. 2017), and exposure to natural environments almost instantly enhances our emotional experience immediately (Neill et al. 2018).

Environmental psychologists have known for some time that simply looking at nature can improve mood, and that exposure to natural environments can make the demands of urban life seem more manageable

### Lower Rates of:

+ Heart Disease

Exposure to Nature =

+ Stroke

+ Obesity

+ Stress

+ Depression



Stanley Park, Vancouver



Hyde Park, London

# 01

## **Mental and Health Wellness**

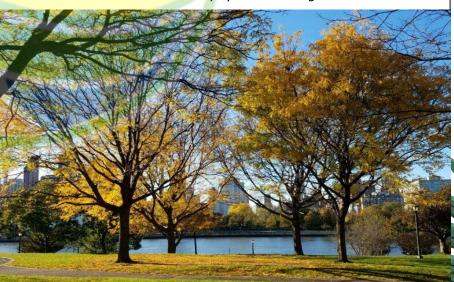
The biophilia hypothesis would suggest that, through an innate love of nature and seeking out natural settings in our lives, it will draw our attention and interest, simultaneously giving us a sense of pleasure and peace

Urban Parks providing people with a stress release during times of **societal disruption (For instance pandemic)**, and will also help people to physically and mentally prepare for such times.









# **O2** Physical Activity

Physical exercise has the ability to minimize the severity of infections with COVID-19, and this is linked to what occurs during an infection in the lungs. The immune system detects and destroys the invading virus in the lungs. With longer-term exercise, more individuals have adequate amounts of antibodies to defend against infections (Sallis et al., 2020).

Engaging in regular physical activity is also protective against poor cardiovascular health, obesity, hypertension, and diabetes, which are shown as risk factors for COVID-19











# **O2** Physical Activity

During urban quarantines, residents' outings are limited, and gymnasiums are closed. Therefore, sports and outdoor activities are reduced, and sedentary behavior (obesity, dementia, depression and insomnia) will increase and can cause potential health risks.

In order to protect the body and reduce the harm caused by Covid-19 disease, the value of regular involvement in some forms of physical activity for physical and psychological well-being is essential.



Taman Mas Park by Verona Design Sdn. Bhd.

Exercise has been shown to have clear health benefits for healthy people and patients with various illnesses (Chen et al., 2020).







# Social Interactions and Community Building

Social interaction is a critical everyday activity of urban residents and has been shown to correlate positively with enhanced health, well-being and quality of life. Quarantine policies have resulted in substantial restrictions on the social conduct of the residents, as they are prohibited from accessing some public places. (Xie et al., 2020)

During Pandemic, preserving public access to parks can build a sense of community threatened by the loss of other indoor social hubs, such as coffee shops and social events, with respect to physical restrictions. Parks also improve social cohesion at a community level and help build a sense of integration and inclusion amongst residents





# Adequate Place For Social Distancing

Parks allow people to spread out, reducing crowding in less desirable areas (Freeman and Eykelbosh 2020; Public Health England 2014

Preserving public access to parks can allow people to maintain, at a safe and responsible distance.

Access to parks could reduce the risk of COVID-19 transmission and increase community and social cohesion. If parks are closed or access is otherwise limited, people may move to less desirable or congested public spaces



## **105** Reduced Air Pollution

Exposure to air pollution is an essential risk factor for many of the chronic diseases that make people become seriously ill, unhealthy, require intensive care, mechanical ventilation, and die from COVID-19 (Urrutia-Pereira et al., 2020).

High levels of air pollution affect the body's natural defenses against airborne viruses, increasing the possibility people will contract viral diseases, even possible with Covid 19.





**Monet Lily by Verona Design** 



Monet Lily by Verona Design

## **05** Reduced Air Pollution

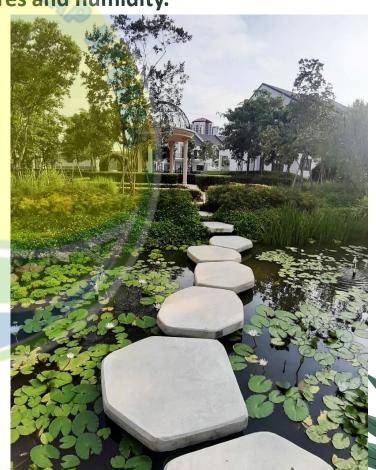
Urban greening can directly minimize air pollution as dust and particles of smoke afe trapped by vegetation. Research has suggested that, on average, 85% of a park's air pollution can be filtered. It can help to control temperatures and humidity.

"Pollution joined up with coronavirus is a particularly dangerous cocktail"
-Anne Hidalgo, Mayor City of Paris-

"If you're getting COVID, and you have been breathing polluted air, it's really putting gasoline on a fire"
-Francesca Dominici, a Harvard Biostatistics Professor-



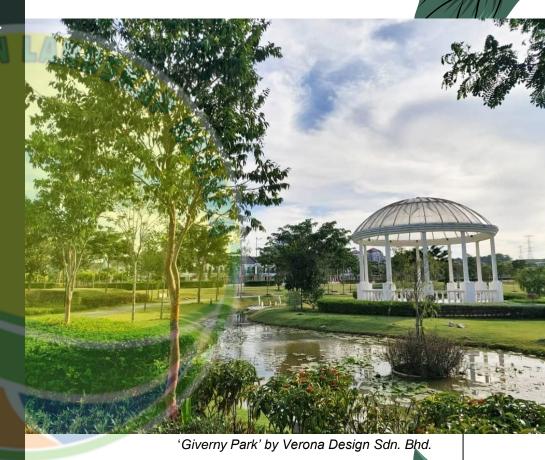
Giverny Park by Verona Design



Monet Lily by Verona Design

The desire to seek recreation and solace in green settings during times of crisis could impress people with the significance of public parks near their doorsteps and increase their awareness of these areas and the biodiversity they contain. During this crisis, people have turned to their parks like never before—for fresh air, exercise, meditation, a sense of calm (Kleinschroth et al, 2020)

Parks are a key feature of a resilient city, partially due to their capacity to be converted for emergency health purposes (Polko, 2010).



The acute COVID-19 crisis illustrates the importance of maintaining urban green infrastructure and further improving it. The experience of the crisis will radically change the world; we recommend that the expanded development of urban greenspaces be part of that change.

By The Conversation | May 24, 2020 11:25AM EST

#### CITYLAB

## The Power of Parks in a Pandemic

For city residents, equitable access to loc green space is more than a coronavirusera amenity. It's critical for physical, emotional, and mental health.

By John Surico 9 April 2020, 21:37 GMT+8



A cyclist rides past a closed Victoria Park in East London. Because of fears of crowding, several popular urban parks in the U.K. and Europe have been closed during the coronavirus crisis. *Hollie Adams/Bloomberg* 

#### Public Parks Matter More Than Ever During a Pandemic



Looking south from New York City's Central Pank Ajay Surest / Wikipedia / CC 87

#### By Richard leBrasseur

The COVID-19 pandemic has altered humans' relationship with natural landscapes in ways that may be long-lasting. One of its most direct effects on people's daily lives is reduced access to public parks.

The U.S. Centers for Disease Control and Prevention has issued guidelines urging Americans to stay at home whenever feasible, and to avoid discretionary travel and gatherings of more than 10 people. Emergency declarations and stay-rathome orders vary from state to state, but many jurisdictions have closed state and county parks, as well as smaller parks, playgrounds, beaches and other outdoor

#### **STRAITSTIMES**

#### Green outdoor spaces can boost mental health

Dr Shureen Faris Abd Shukor 10/12/2020





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### worldlandscapearchitect.com



#### Life in the Time of Covid Flickr User:Billie Grace Ward

During COVID, whether in lockdown or restrictions, people have become more aware of the importance of the outdoor spaces, whether it is their own garden, local or regional park and the wider landscape.

#### Think about creating more 'breathable spaces'

(a) (f) (c) (ii) (d)

May 7, 2020 @ 12:10am



In the COVID-19 era, a renewed appreciation of our parks and open spaces

APR 10, 2020 COVID-19 AND CITIES, HEA



A cyclist rides the Halls Bayou Greenway trail, part of the Bayou Greenways 2020 initi

ANDY DUIN

During this time of heightened stress and anxiety, stay-athome orders and social distancing, the respite provided by simple things like a walk or run in the park has proved to be more important than ever. Let's not forget that when we reach the other side of this.

#### Pandemic underscores how public parks shape public health

Uneven access to green spaces is a health risk that can affect longevity and mental health.



For years, public health experts have ursed people to spend more time outdoors for the nourishment of





#### **CLOSING OF THE PARKS.**

The closure of parks and public green spaces should be a temporary, last-resort disease control measure, and the reopening of closed parks should be a priority as urban shutdowns occur.



#### MPs want Kuala Lumpur parks to remain open



he MPs said public parks are the best locations to carry dut lessere activities in accordance with all SCPs. PETALING JAYA: A group of Pakatan Harapan MPs from Kuala Lumpur today urged Kuala

Lumpur City Hall (DBKL) to reconsider its decision to close all public parks and playground/QUALA LUMPUR, Ian 14 - Kuala Lumpur MPs have urged the Kuala Lumpur City Hall (DBKL) due to the movement control order (MCO).

The MPs said the ruling was not in line with Prime Minister Muhyiddin Yassin's speech on Monday in which he noted that long periods of isolation can take a toll on mental health.

For Kuala Lumpur residents, public parks are the most suitable, controlled and safe location to carry out leisure activities in accordance with all standard operating procedures sealth and citizens are allowed to leave the house for recreational purposes with household SOPs) under the National Security Council (MKN)," the MPs said in a statement.

#### Keep public parks open during MCO, KL MPs tell City Hall

Thursday, 14 Jan 2021 08:57 AM MYT BY JOHN BUNYAN



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resterday to reverse its decision to close all public parks and playgrounds throughout the novement control order (MCO):

The nine MPs in a joint statement said that the city council's decision was not in line with the Frime Minister Tan Sri Muhyiddin Yassin's speech, who had earlier announced that members o the public are allowed to jog and cycle during the MCO period.

The prime minister said that isolation for a long period of time can put pressure on mental

### **OR-Patrol**

10m 35 \$

burden on hospitals, qua-

stay home, warns 90pc Co

Sabah forms special comm coordinate federal projec

Dr Noor Hisham: Workpla biggest contributor to ner

Health Ministry: 2,720 nev cases recorded in Malaysi eight deaths

#### KL parks to be open to the public during MCO 2.0



People engaging in recreational activities at the Titiwangsa Lake Gardens in Kuala Lumpur yesterday. PIC BY MOHAMAD

KUALA LUMPUR: The Kuala Lumpur City Hall (DBKL) has decided that all its parks would be opened to the public during the Movement Control Order 2.0 (MCO 2.0).

Mayor Datuk Mahadi Che Ngah said certain areas in the parks such as playgrounds would be out of bounds to prevent people from grouping together or gathering in large numbers.

#### Reopen public parks, urges Zuraida

BY ZAKIAH KOYA









PETALING JAYA: All public recreational parks should be opened to enable people to exercise but with strict adherence to the SOP, says the Housing and Local Governmen





### LONG TIME RECOMMENDATIONS.

The pandemic could change **the form and distribution of green spaces we want** as well as our **perceptions of what should be given by green spaces.** This risk is clearly affected **by the size of public green spaces in cities** (Honey-Roses et al., 2020).

- Infrastructure plans should include policies and strategies for creating healthy environments.
- > To priotized green space on streets and neighbourhoods that lack them.
- Ensure that quality parks and green spaces are located in close proximity to people, regardless of where they live. Every citizen in the city should has equal access to shared public spaces.
- Municipalities should review local design guidelines and zoning codes to ensure they include provisions for greenscapes, greenstreets, or other greening strategies (Widen walkway / footpath / cycle path etc.)





TTDI Gateway Gallery by Verona Design Sdn. Bhd.





**Parklets**Sidewalk Extensions

**Social Distancing Play** 

#### In the future....

It is perhaps more timeconsuming than ever to strengthen the intersections between landscape architects, urban planners, environmental psychology, and public health, and to explore how to use natural spaces in cities to mitigate some of the psychosocial effects of the current public health emergency involving isolation, anxiety, and depression......



#### **CONCLUSION**



Maintaining or increasing space for nature in cities and keeping it accessible to the public should be part of the sustainability agenda, aiming simultaneously to strive towards SDG 3 (Good Health and Well-Being), and SDG 11 (Sustainable Cities and Communities), with having a proper Quantitative and Qualitative Indicator to push to the boundaries and go beyond in implementing the sustainability development in Malaysia.

Access to parks and green space is vitally important for the health and well-being of individuals, and it will lead to healthier populations.



#### REFERENCES.....

- 1. Capolongo, S., Rebecchi, A., Buffoli, M., Letizia, A., Carlo, S., Fara, G. M., & Daniela, D. A. (2020). COVID-19 and Cities: from Urban Health strategies to the pandemic challenge. A Decalogue of Public Health opportunities
- 2. Chen, P., Mao, L., Nassis, G. P., Harmer, P., Ainsworth, B. E., & Li, F. (2020). Wuhan coronavirus (2019-nCoV): The need to maintain regular physical activity while taking precautions. *Journal of sport and health science*, 9(2), 103.
- 3. Honey-Roses, J., Anguelovski, I., Bohigas, J., Chireh, V., Daher, C., Konijnendijk, C., ... & Oscilowicz, E. (2020). The impact of COVID-19 on public space: a review of the emerging questions.
- 4. Kleinschroth, F., & Kowarik, I. (2020). COVID-19 crisis demonstrates the urgent need for urban greenspaces. *Frontiers in Ecology and the Environment*, 18(6), 318.
- 5. McCunn, L. J. (2020). "The importance of nature to city living during the COVID-19 pandemic: Considerations and goals from environment psychology." Cities & Health, 1-4.
- 6. Polko, A., 2010. Public space development in the context of urban and regional resilience. Cambridge Journal of Regions, Economy and Society
- 7. Samuelsson, K., Barthel, S., Colding, J., Macassa, G., & Giusti, M. (2020). Urban nature as a source of resilience during social distancing amidst the coronavirus pandemic.
- 8. Sallis, J. F., Pratt, M., & Sallis, J. F. (2020). Multiple benefits of physical activity during the Coronavirus pandemic. *Rev Bras Ativ Fís Saúde*
- 9. Slater, S. J., Christiana, R. W., & Gustat, J. (2020). Peer Reviewed: Recommendations for keeping parks and green space accessible for mental and physical health during COVID-19 and other pandemics. *Preventing chronic disease*, 17.
- 10. Urrutia-Pereira, M., Mello-da-Silva, C. A., & Solé, D. (2020). COVID-19 and air pollution: A dangerous association?. *Allergologia et Immunopathologia*, 48(5), 496-499.
- 11. Xie, J., Luo, S., Furuya, K., & Sun, D. (2020). Urban Parks as Green Buffers During the COVID-19 Pandemic Sustainability, 12(17), 6751.

