



# THE RESILIENCE DIVIDEND

An Approach To Build Back Better

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MICHAEL BERKOWITZ



RESILIENT CITIES CATALYST



# Global Cities at Risk

Cities face severe climate risks due to global warming, sea level rise, social inequities and the pandemic.



## CLIMATE

2.1 °F

19 of the warmest years have occurred since 2000

3.3 MM

Global sea levels have risen 7" in past 100 years



## SOCIOECONOMIC INEQUITY

100 MIL

People pushed to poverty during pandemic

2.5 BIL

Approximately, today a third of people lack access to sanitation



## COVID-19 PANDEMIC

4.4 %

Decrease in the global economy in 2019 and 2020

114 MIL

Total number of jobs lost globally in 2020

# Last 12 Months: A Story of Compounding Shocks & Stresses

COVID-19



CLIMATE SHOCKS



SOCIAL INEQUITIES

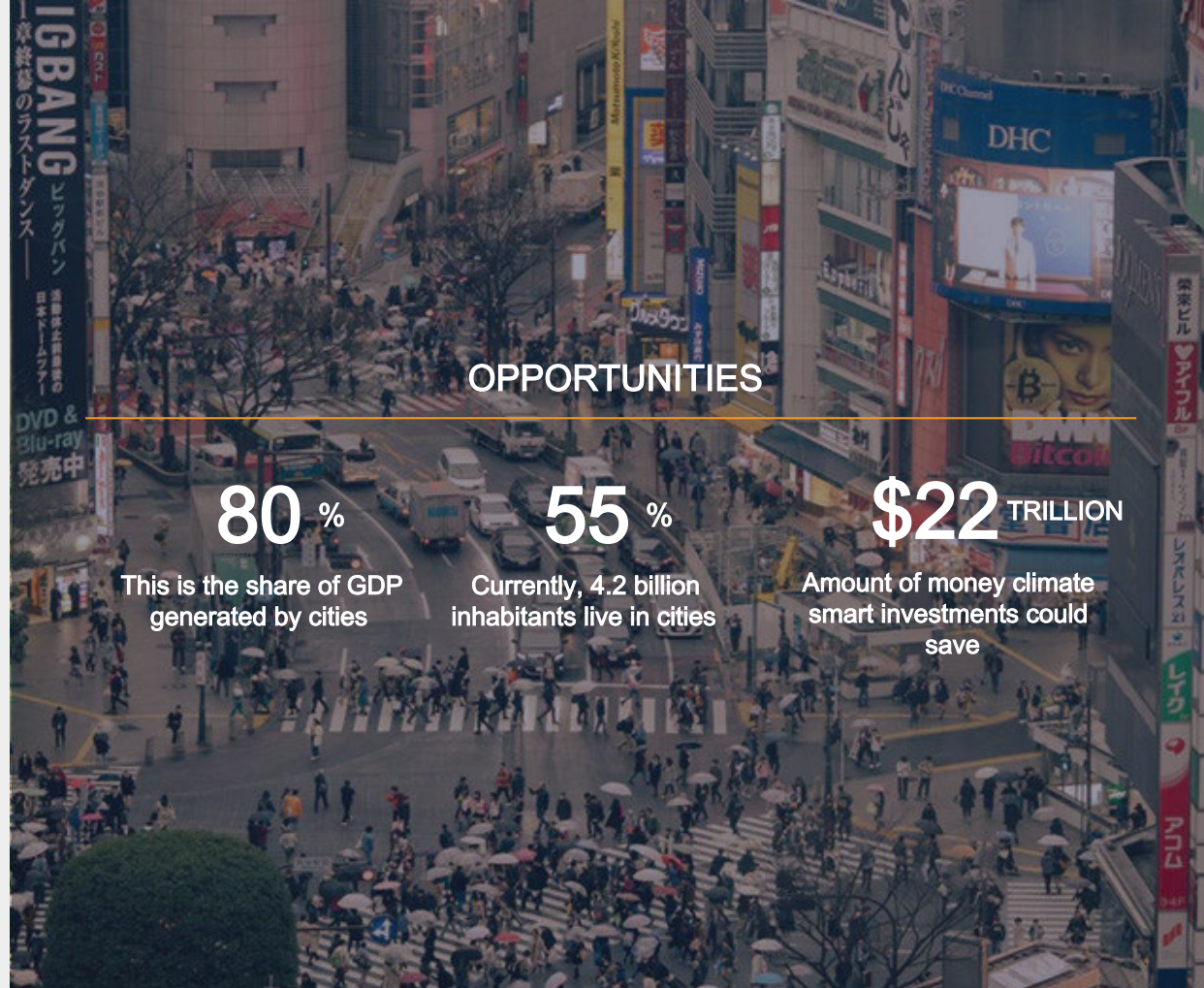


[www.dallanews.com](http://www.dallanews.com)

# Cities: Place of Opportunities

Although the pandemic has accelerated economic transformation, urban density will still be an advantage

New businesses and households will take advantage of lower rents



## OPPORTUNITIES

80 %

This is the share of GDP generated by cities

55 %

Currently, 4.2 billion inhabitants live in cities

\$22 TRILLION

Amount of money climate smart investments could save

# The Urban Resilience

It is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience



[www.ny.curbed.com](http://www.ny.curbed.com)

# The Resilience Dividend

New approach that addresses problems in an integrated manner

Provides secondary benefits (the Resilience Dividend) to reduce fragility and build resilience





# Urban Oasis: The School Garden Project, Paris, France

100 RESILIENT CITIES





# Paris: Shocks & Stresses

## URBAN FLOODING



## INCREASED POLLUTION



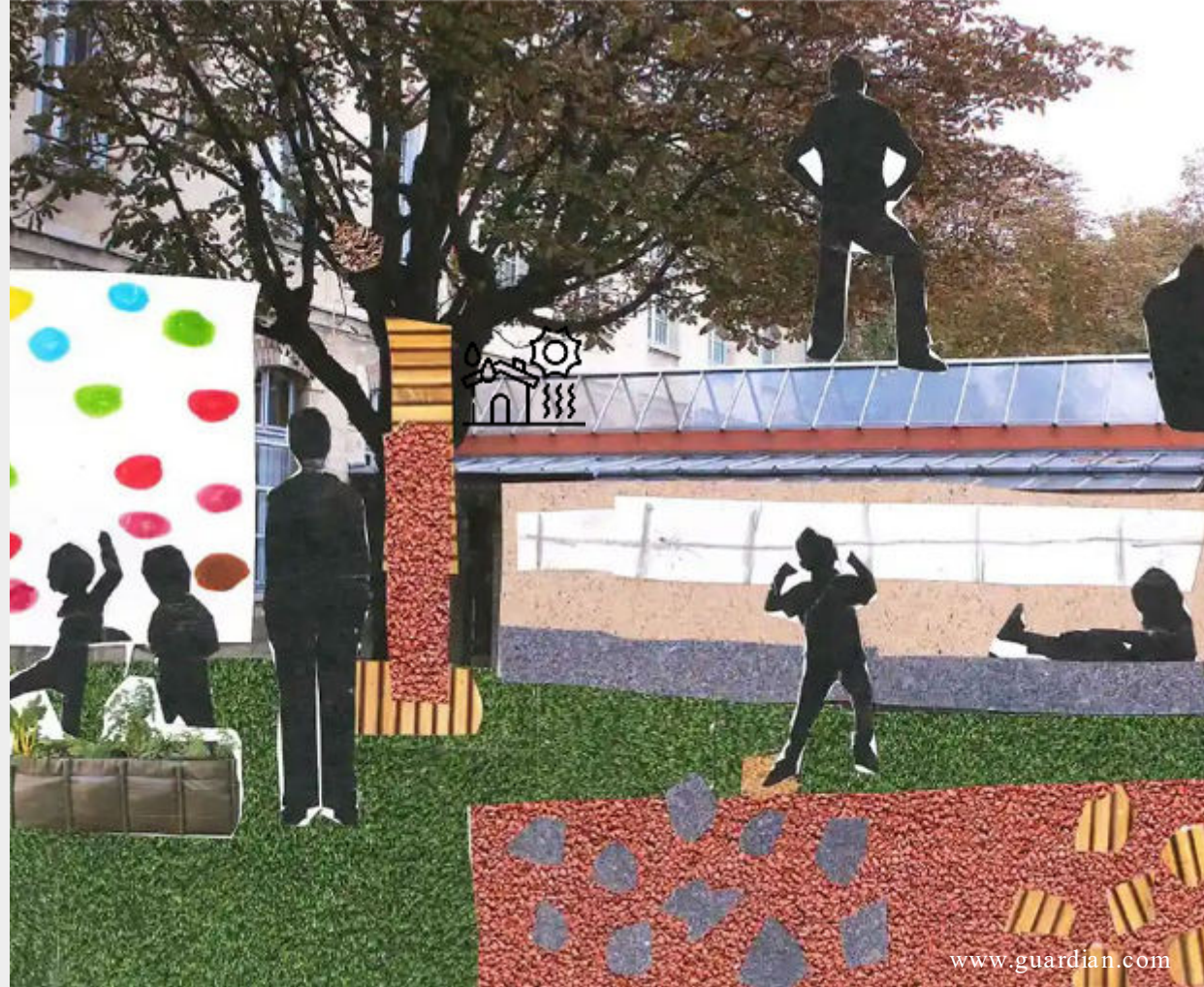
## TERRORISM



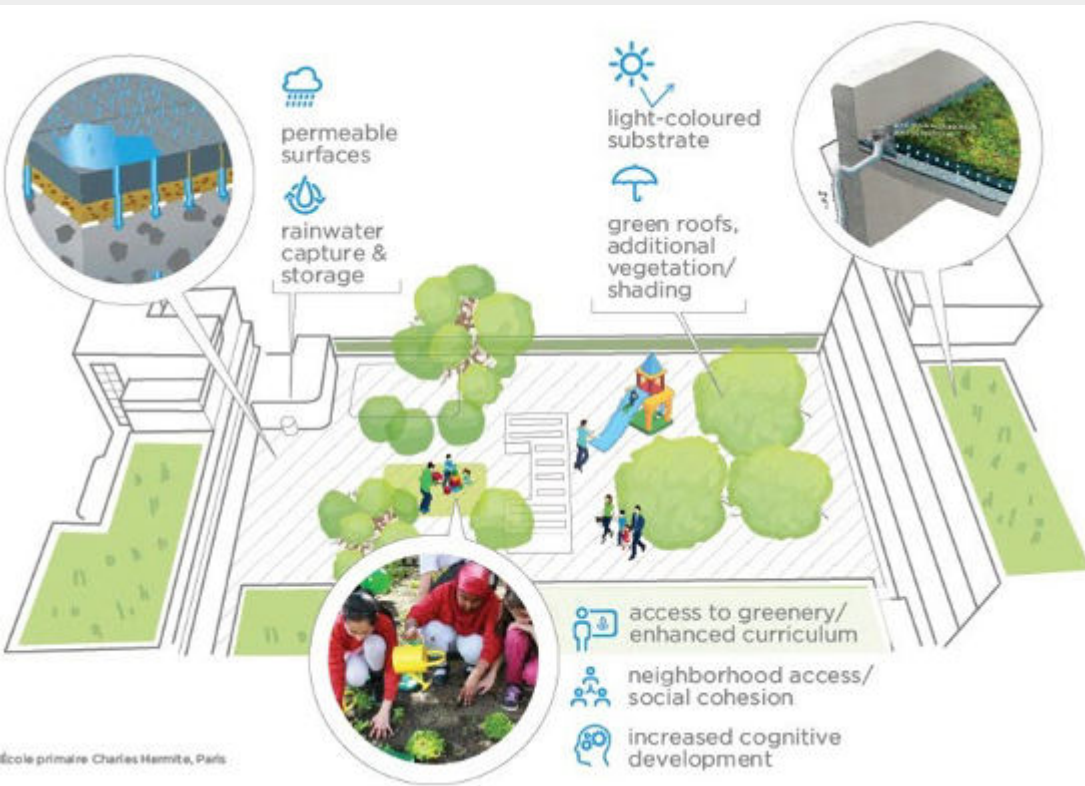
# Resilient School Yards

Reducing the Urban Heat Island  
Effect

The goal of the Oasis Schoolyards is  
to reduce the urban heat island  
effect by redesigning schoolyards  
as urban gardens



[www.guardian.com](http://www.guardian.com)



École primaire Charles Hammitte, Paris



# RESILIENCE DIVIDENDS



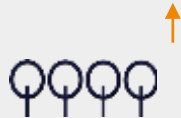
REDUCED  
FLOOD RISK



INCREASED  
SOCIAL COHESION



REDUCED URBAN  
HEAT & DUST



INCREASED  
GREEN SPACES





# Infrastructure Resilience, Mumbai, India

CONCEIVED BY CITIZENS GROUP 'ONE MATUNGA'

Source: One Matunga

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# Mumbai: Shocks & Stresses

PARKING AND DUMPING SITE



LACK OF PEDESTRIAN SPACES



URBAN FLOODING





# Under the Bridge

Addressing Urban Flooding and  
Pedestrian Traffic

Provide residents with more open recreational space as the city has the lowest amount of open space per capita in the country



Source: One Matunga



# RESILIENCE DIVIDENDS



REDUCED  
FLOODING



ECONOMIC  
GROWTH



REDUCED  
POLLUTION



INCREASED  
ROAD SAFETY



Source: One Matunga



# Economic Conversion

NEW ORLEANS, LOUISIANA

AP Photo/Gerald Herbert, File

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# Coastal Resilience

## Water Management as Economic Conversion

A study by GNO.Inc showed that many of the jobs in the oil and gas industry are similar to water management jobs

With nearly 44,000 jobs, the water management industry has eclipsed the oil and gas industry in the southeast Louisiana



[www.atlantic.com](http://www.atlantic.com)

# Coastal Resilience

The City of New Orleans is using its water management projects as a living lab to train workers

Here is a rendering of the Gentilly water district



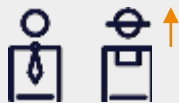
[www.nola.com](http://www.nola.com)



# RESILIENCE DIVIDENDS



REDUCED  
FLOODING



INCREASED JOBS



INCREASED  
GREEN SPACES



INCREASED  
ECONOMIC DIVERSITY



[www.nola.com](http://www.nola.com)

# CONCLUSION

**1.** Our challenges are integrated

**2.** But that allows us to address them at once

**3.** Private sector, government and civil society can work together to develop resilience approaches with multiple benefits



Bushwick Community Farm