

NAP-GSP REGIONAL TRAINING WORKSHOP FOR ASIA

Mainstreaming climate change adaptation into water resources

Seoul, 13 - 16 September 2017

Approaches for integrating CCA into Water Resources – A step forward on climate change adaptation

YunRa Choi, KPC

IMPACT

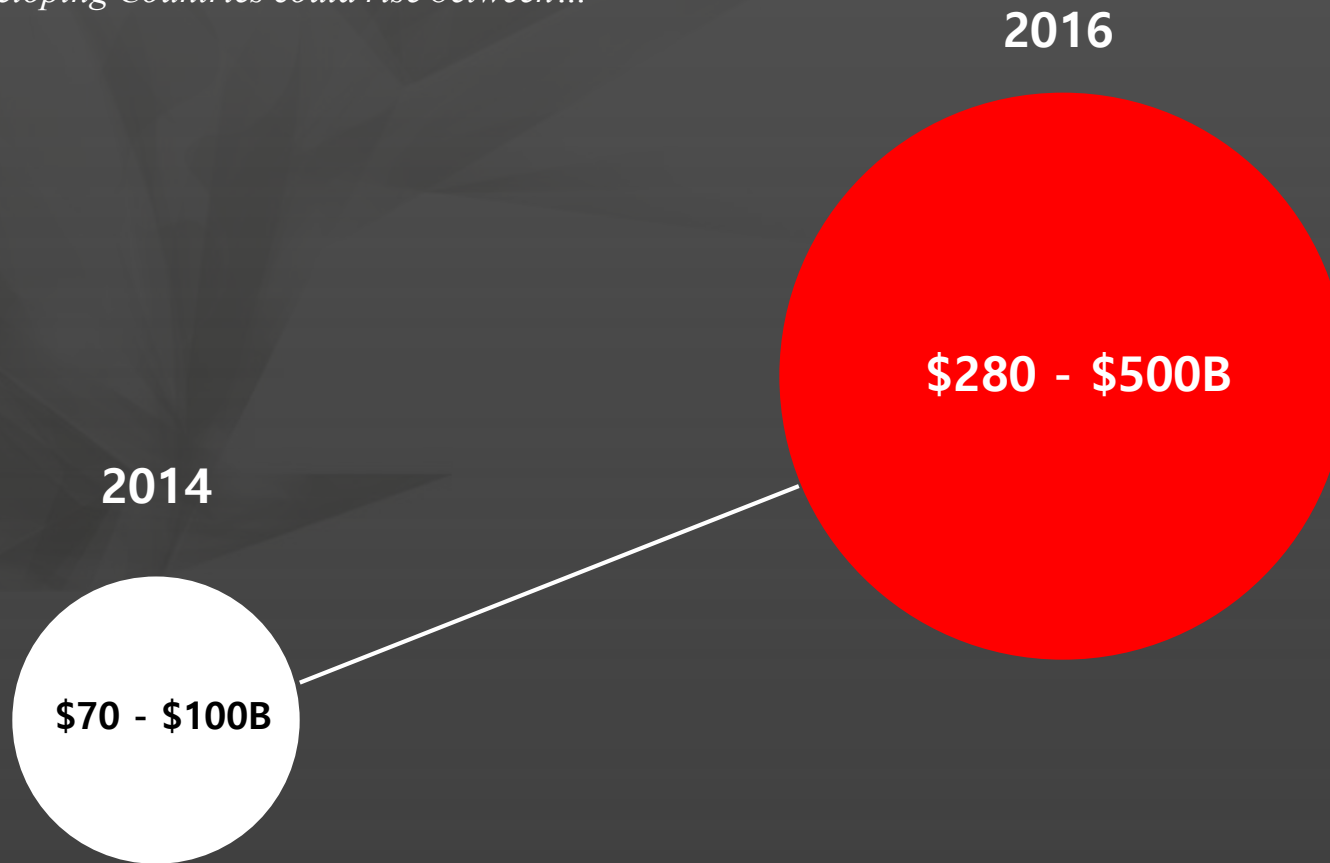


Climate Change Adaptation

*The cost of Adapting To climate Change
In Developing Countries could rise between...*

By 2050

5 *Times*



GHG emissions & Energy Consumption

1990

2000

2014

Total Energy Consumption

Global **8**th

93.2M
TOE

293.1M
tonCO_{2e}

192.9M
TOE

500.6M
tonCO_{2e}

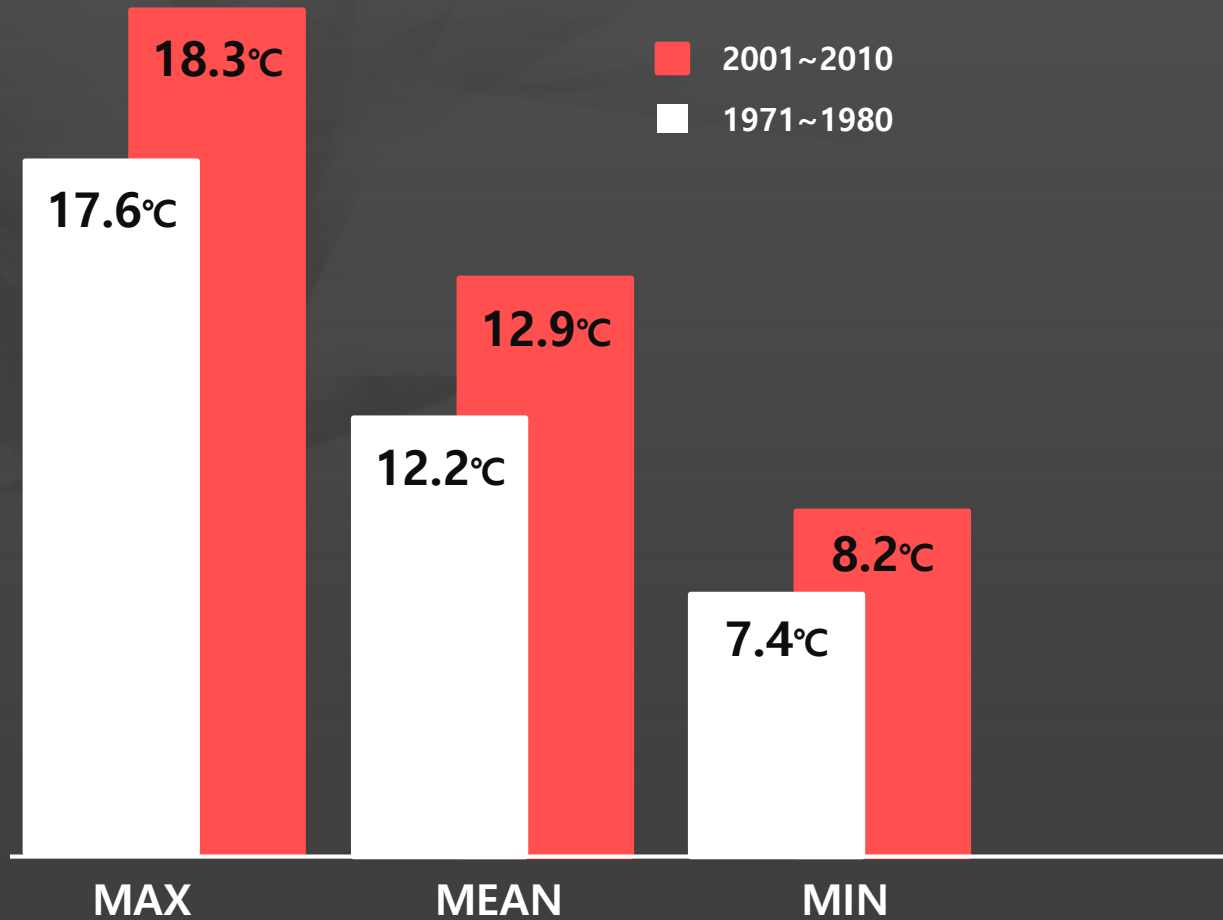
281.9M
TOE

690.6M
tonCO_{2e}

Global **7**th

Total GHG emissions

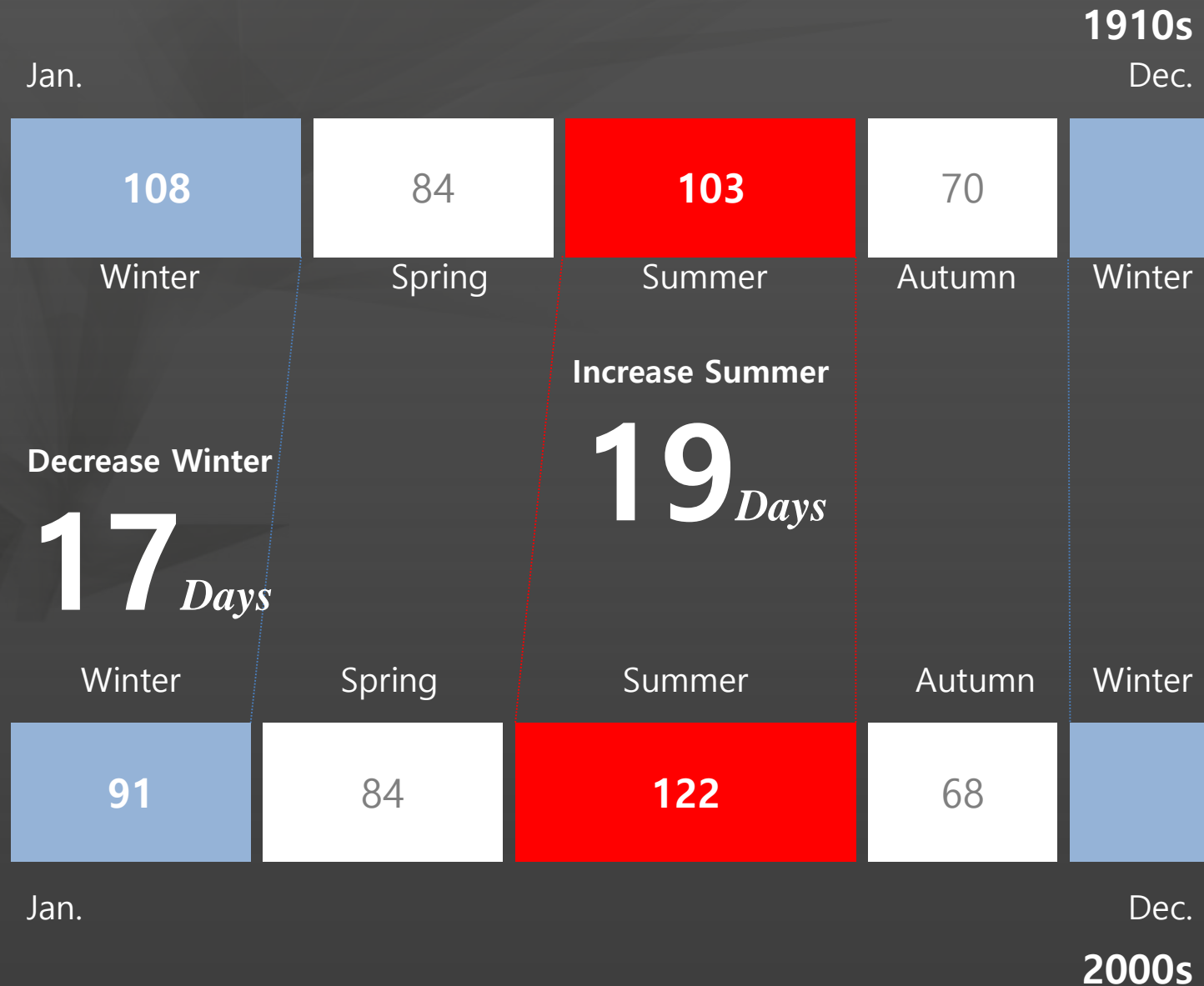
Recent Temperature Trends



Past 40years

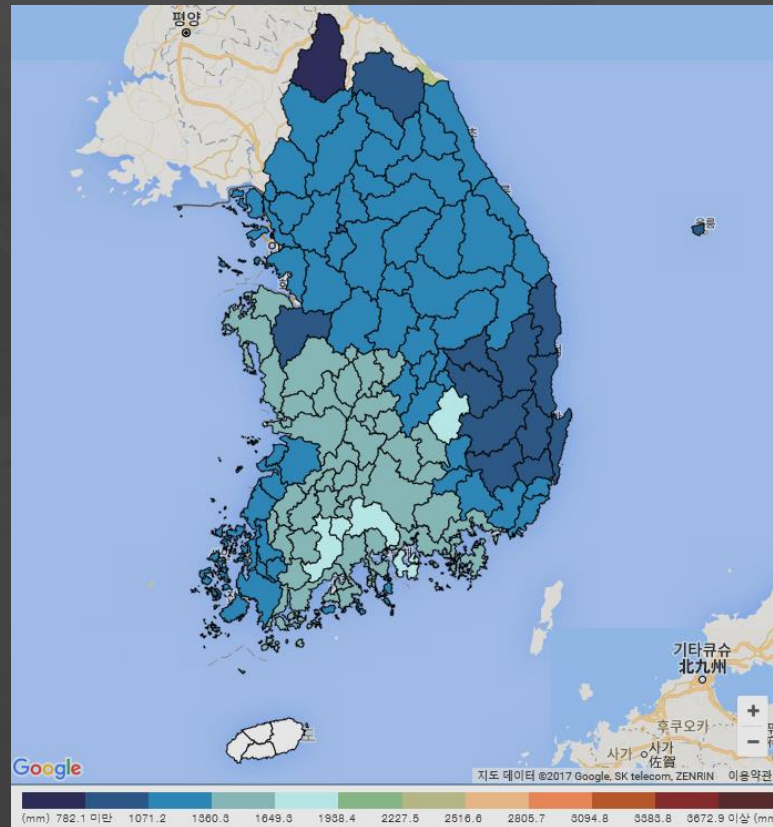
0.7 °C *Increase*
(1971~2010)

Length of Growing Season

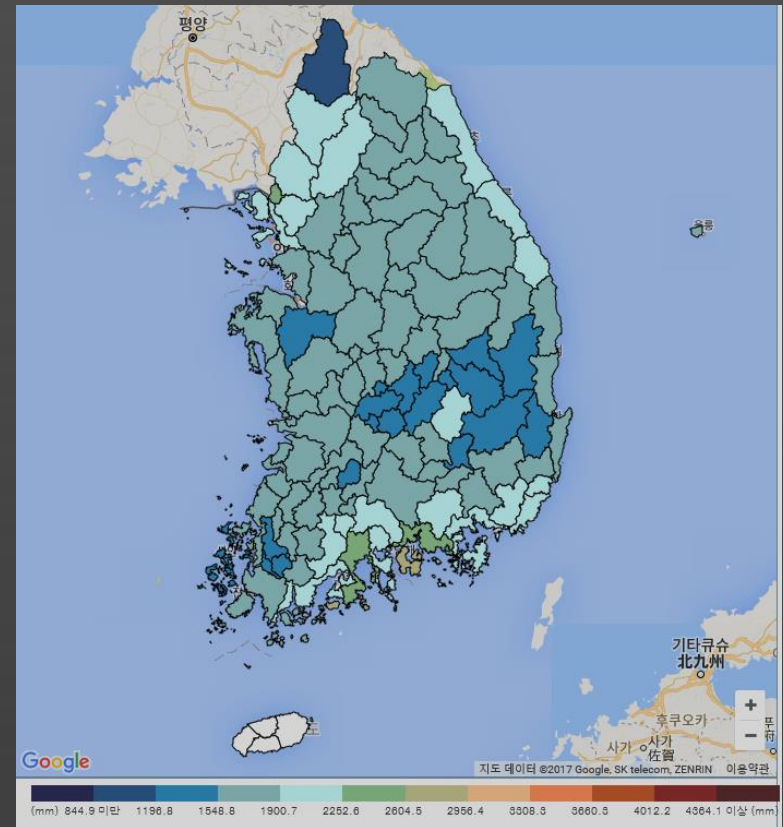


Precipitation

2000



2100

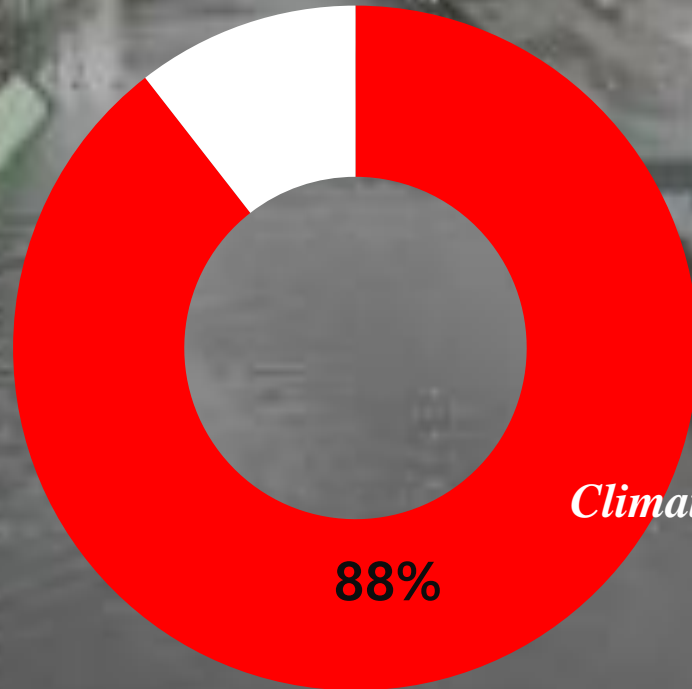


Global Natural Disaster

Economic Cost

17B

(USD)



Climate Change Related

88%

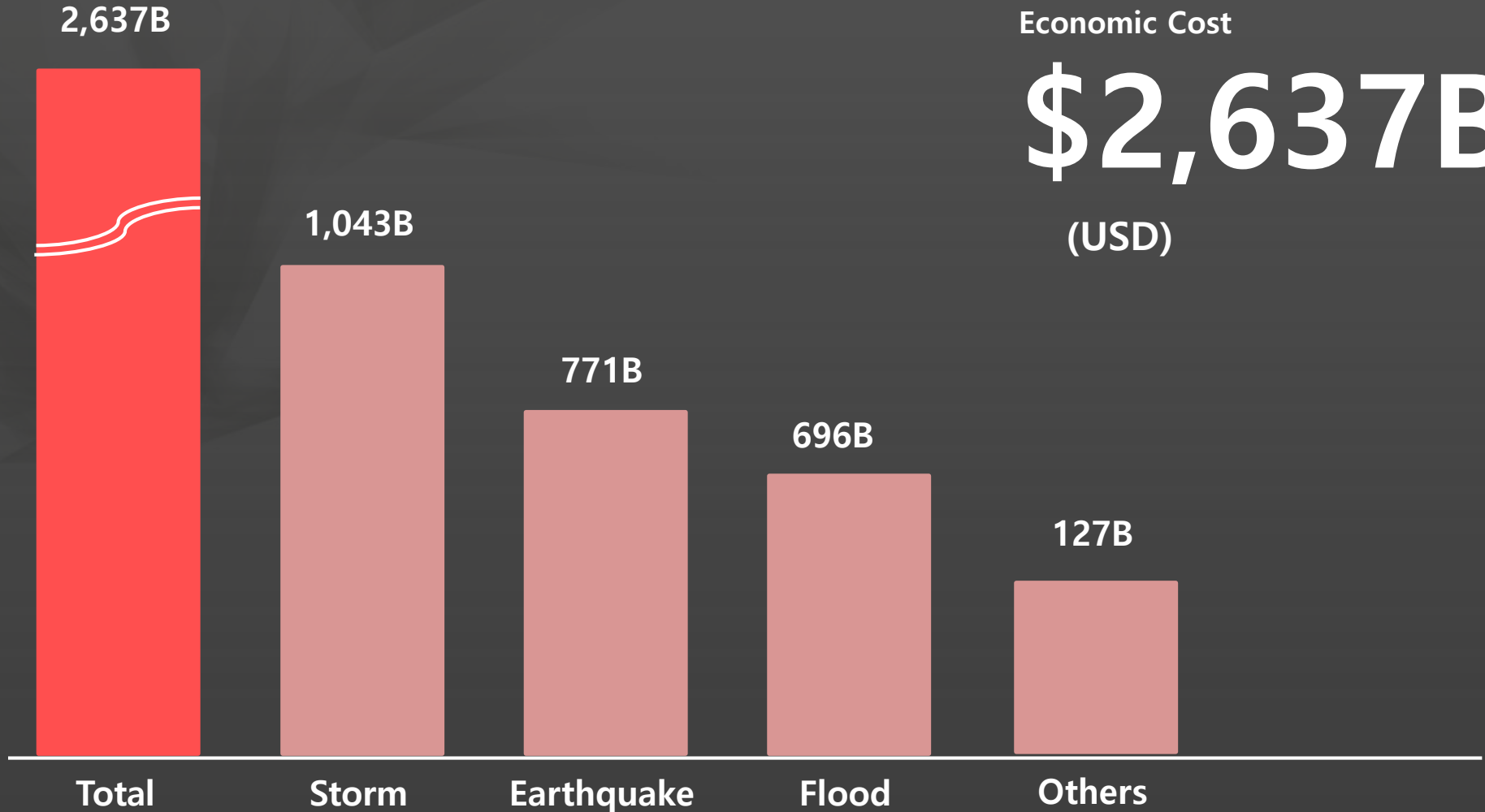
Meteorological Disasters

(1960-2015)

Economic Cost

\$2,637B

(USD)



Hurricane Irma

A photograph of a street in Florida after Hurricane Irma. The street is lined with palm trees, many of which are leaning or broken. In the background, there are modern buildings with balconies. A red SUV is driving on the wet street, and a person on a bicycle is visible in the distance. The sky is overcast and grey.

Economic Cost

300B (USD)

(2017.09.14)

Name : Hurricane Irma

Location : Florida, US

Damage : Residential, business, key crops etc.

Formed : August 30,2017

Dissipated : September 14, 2017

Highest Winds: 295km/h

Population: 20.61 million (2016)

Cheong-Ju Special Disaster Area



Economic Cost

51.5M (USD)

(2017.07.27)

Reason : Torrential Rain

Location : Cheongju, Korea

Damage : Residential, business etc.

Support : National Fund

Precipitation: 307.7mm

Population : 831,635 (2015)

Damage Type

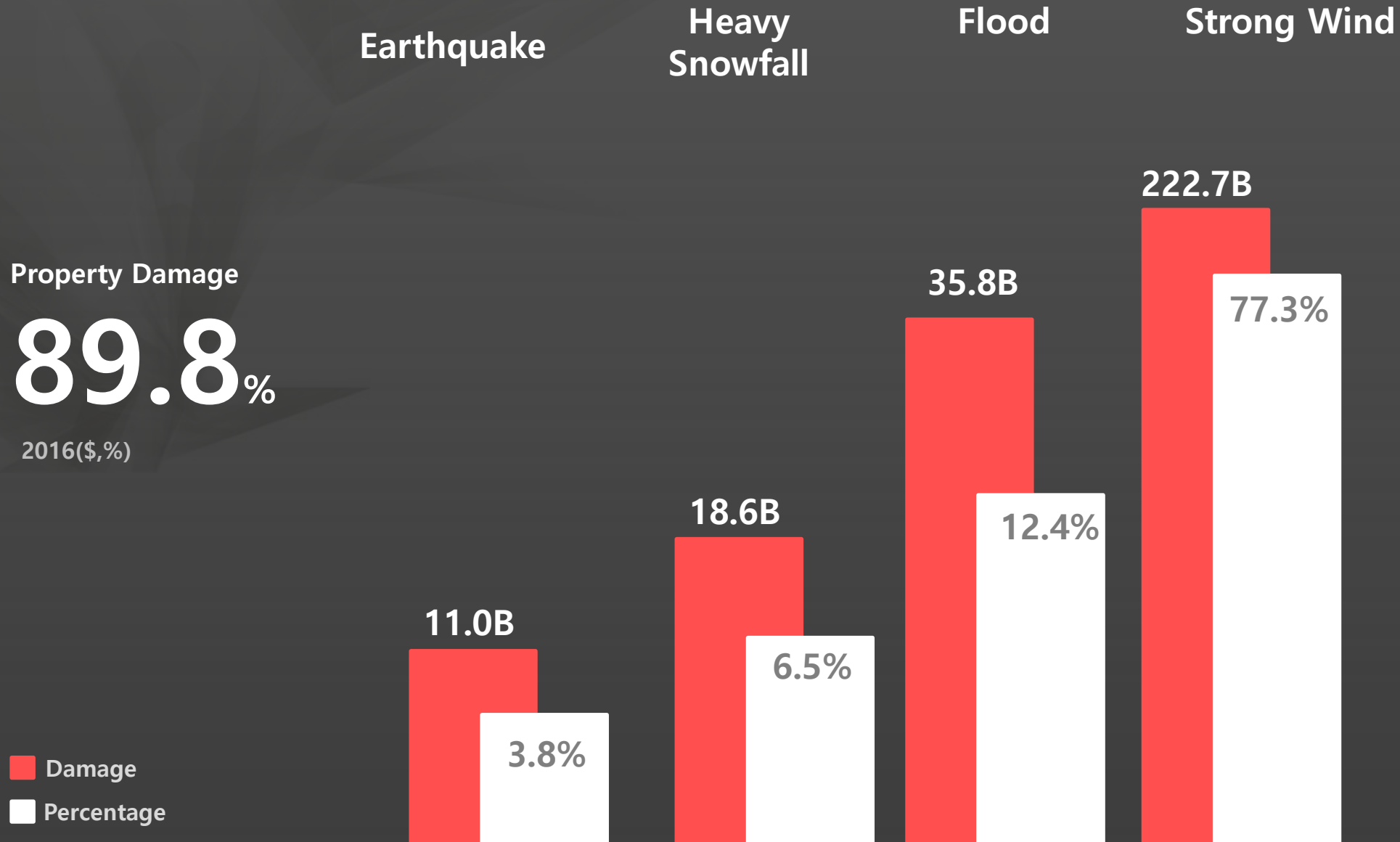
*Public organization(SOC),
Building,
Vessel,
Farm,
Property,*



Disaster Economic
Cost

73.2 %

Disaster and Damage



Public Organization Damage(SOC)

Over 10years

172 *Times*

2006~2015

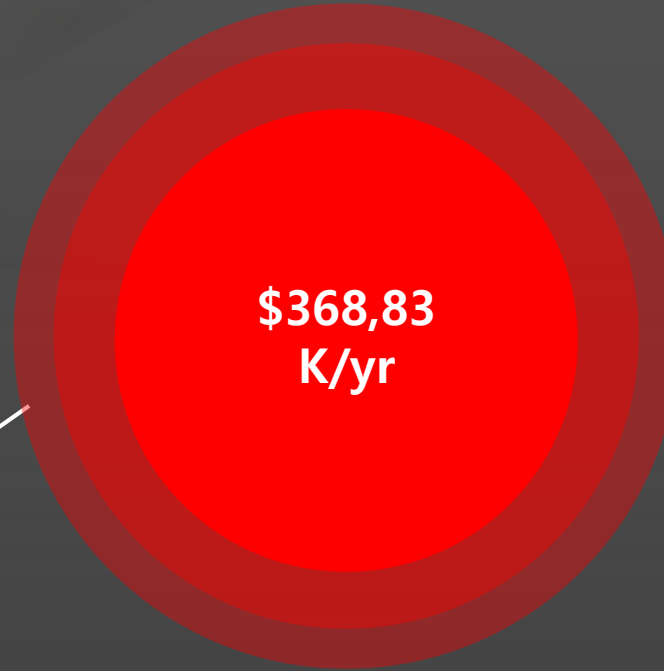
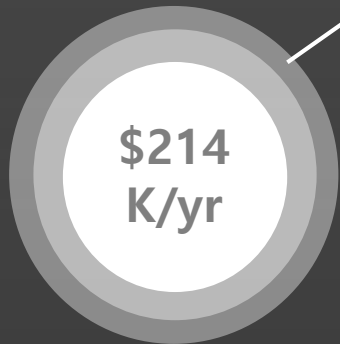
\$368,83
K/yr

2016

\$185,827
K/yr

1916~1925

\$214
K/yr



Paris Agreement

Nations Unies

Conférence sur les Changements Climatiques 2015

COP21/CMP11

Paris France

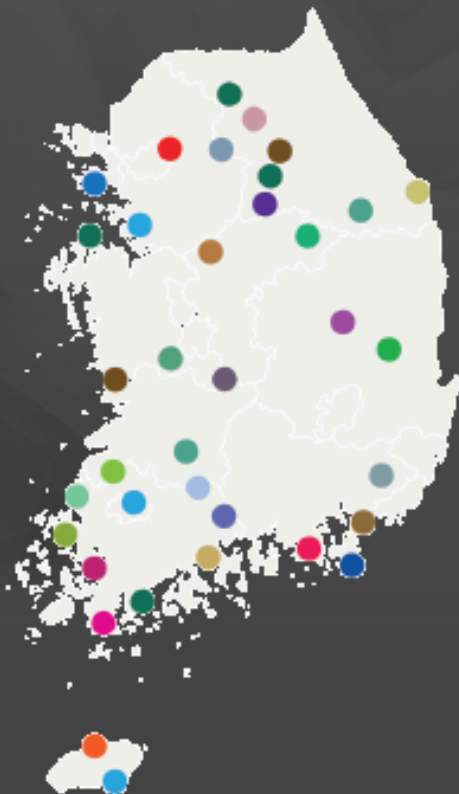


#ParisAgreement

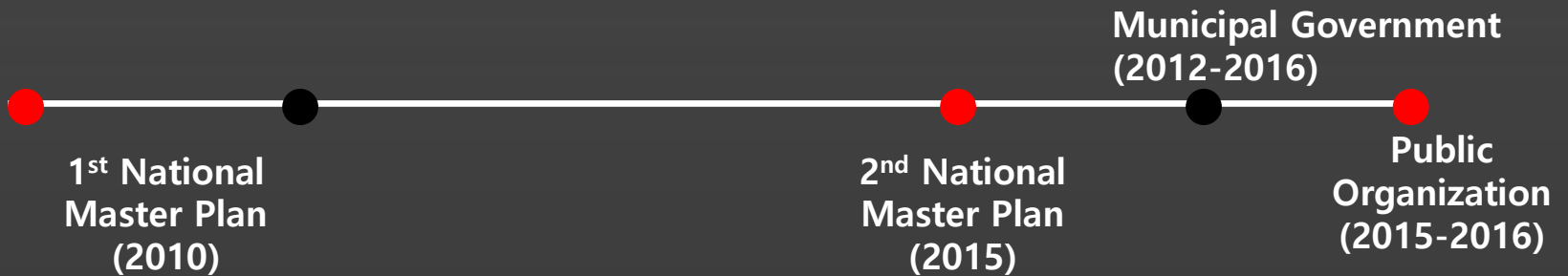
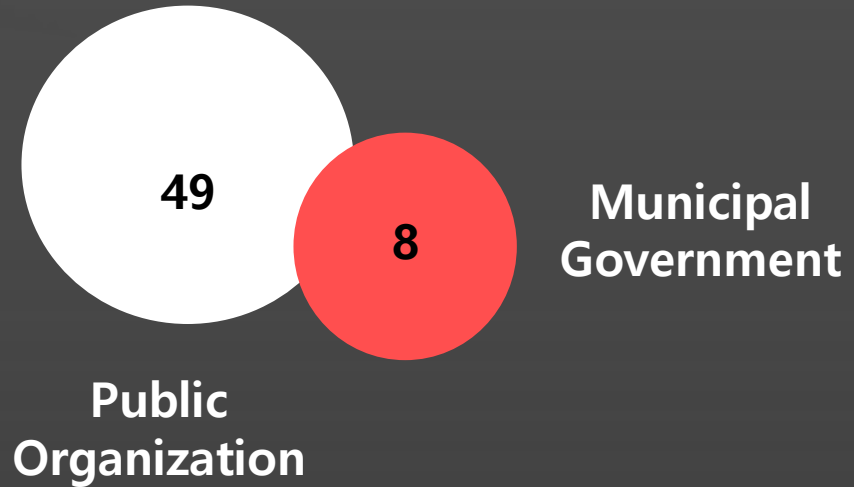
“Long live the planet.

Long live Humanity. Long live life itself.”

Climate Change Adaptation Scheme



243 Cities

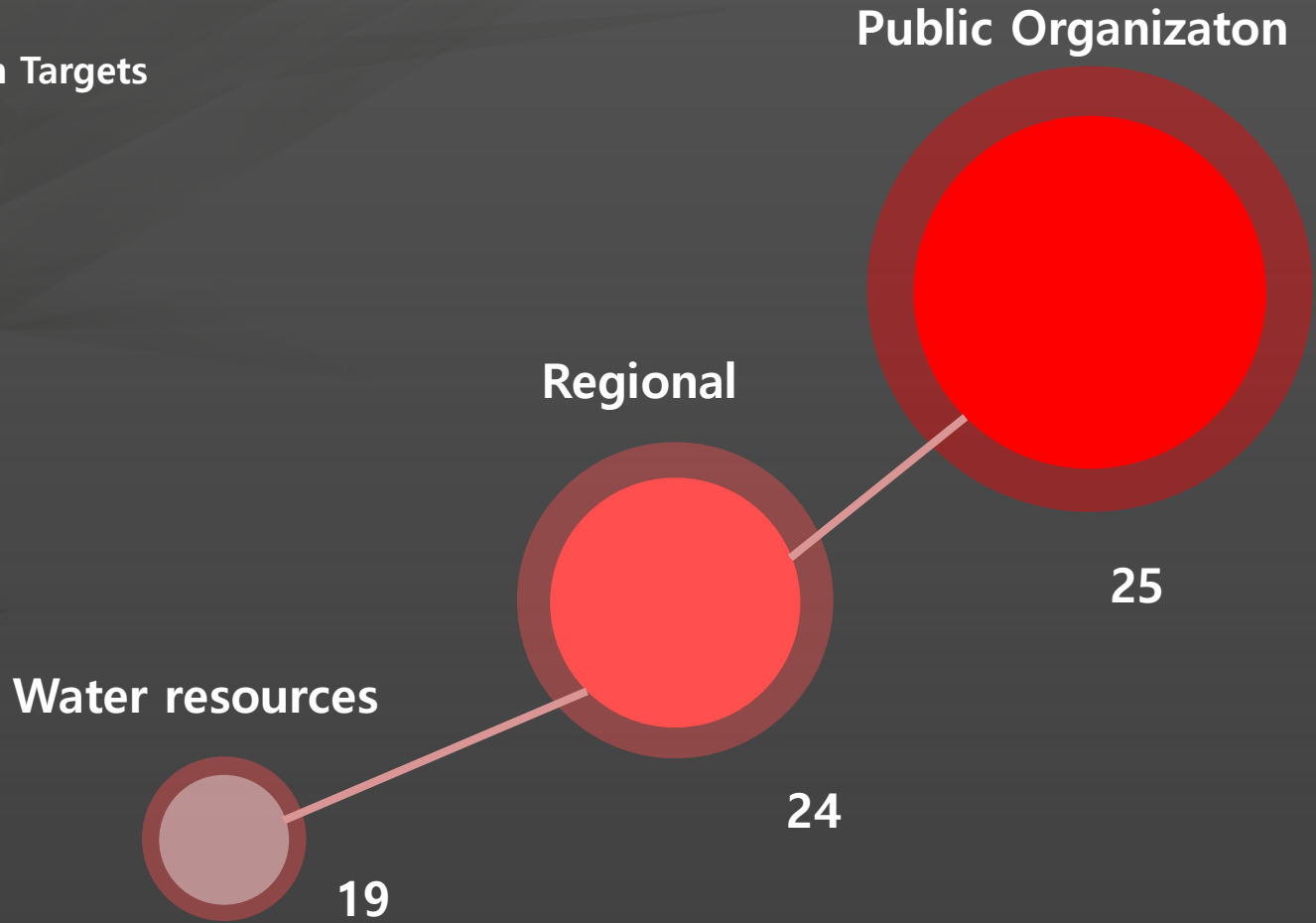


Public Organization

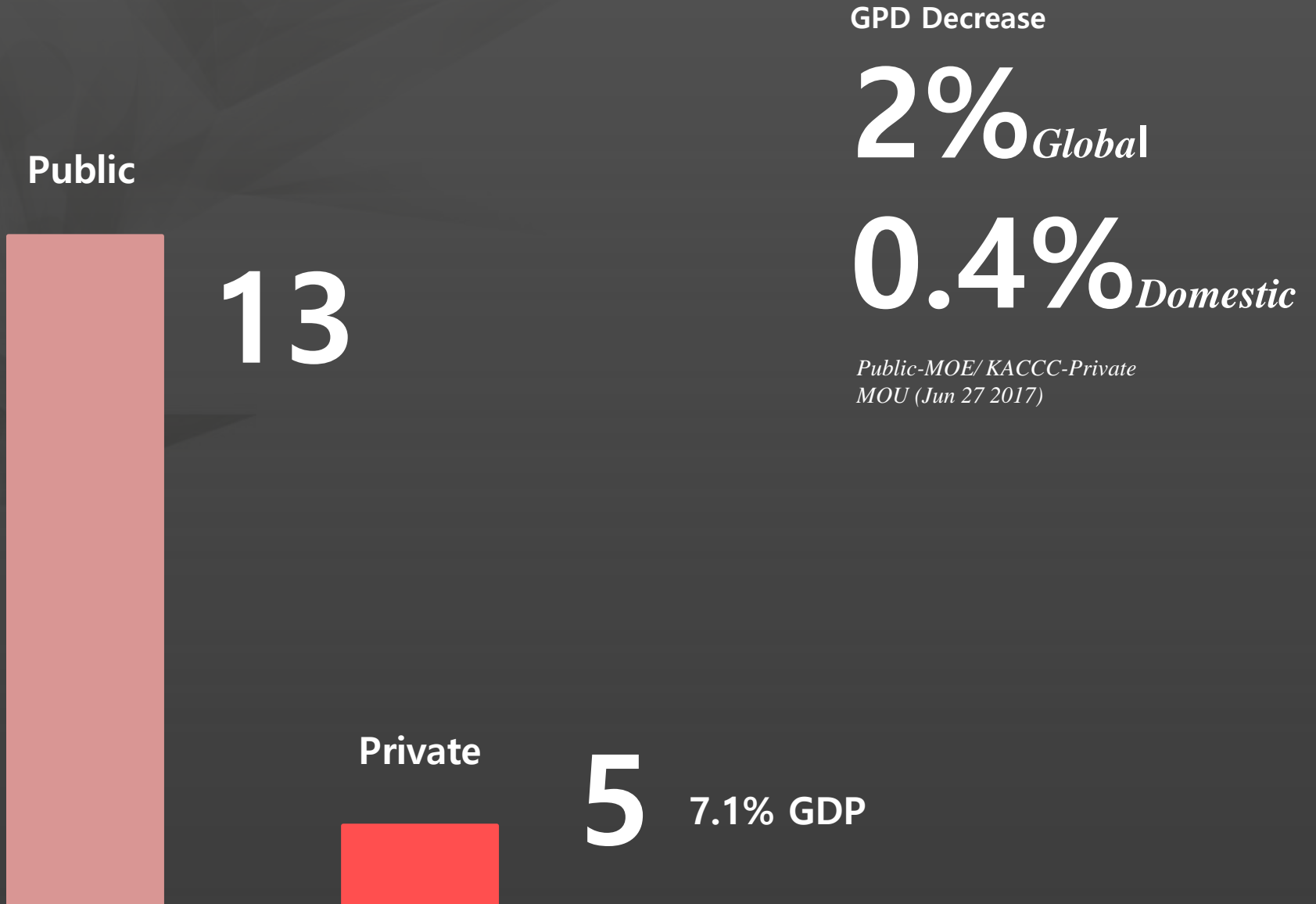
Climate Change Adaptation Targets

49 *Organization*

40 %



Climate Change Adaptation Commitment



The 1st Process

National Adaptation Plan

2016_{yr}



The 2nd process

The number of days a year

Heat Wave

33 °C

Cold Wave

-12 °C

Heavy Rain

80 mm

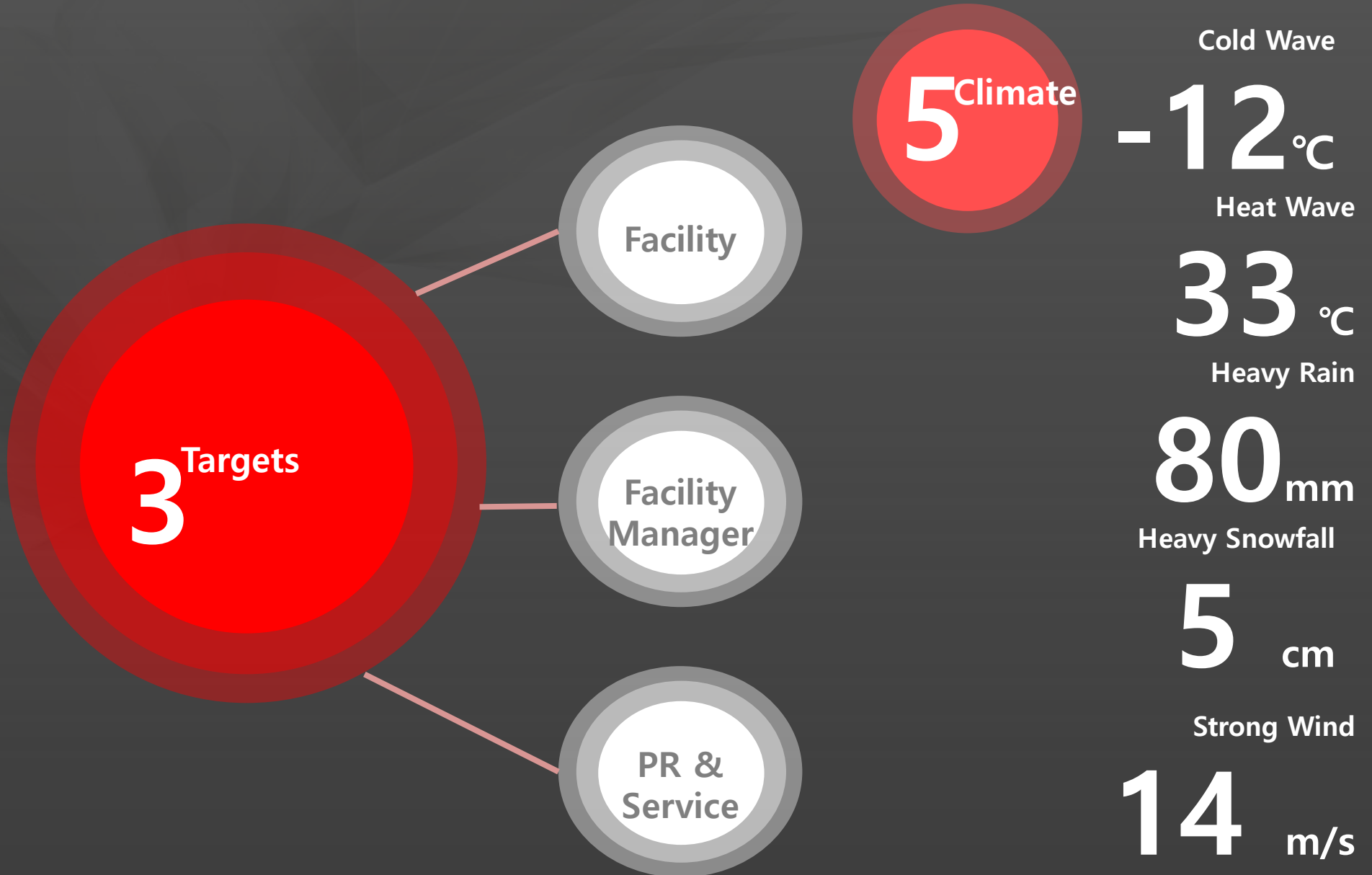
Strong Wind

14 m/s

Heavy Snowfall

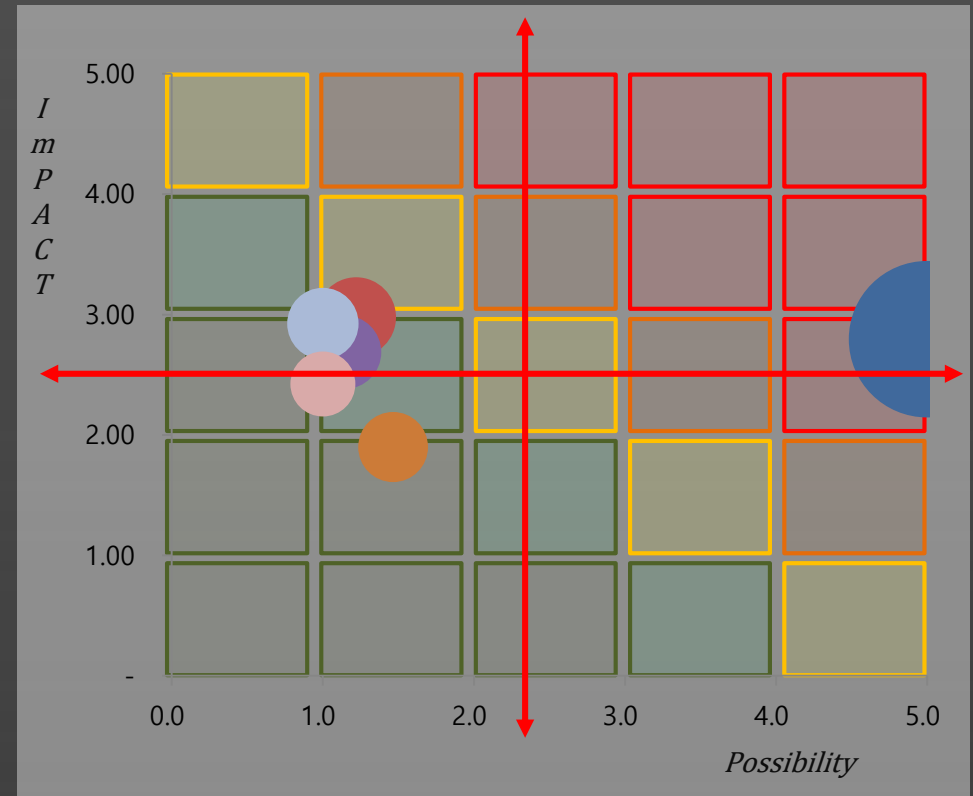
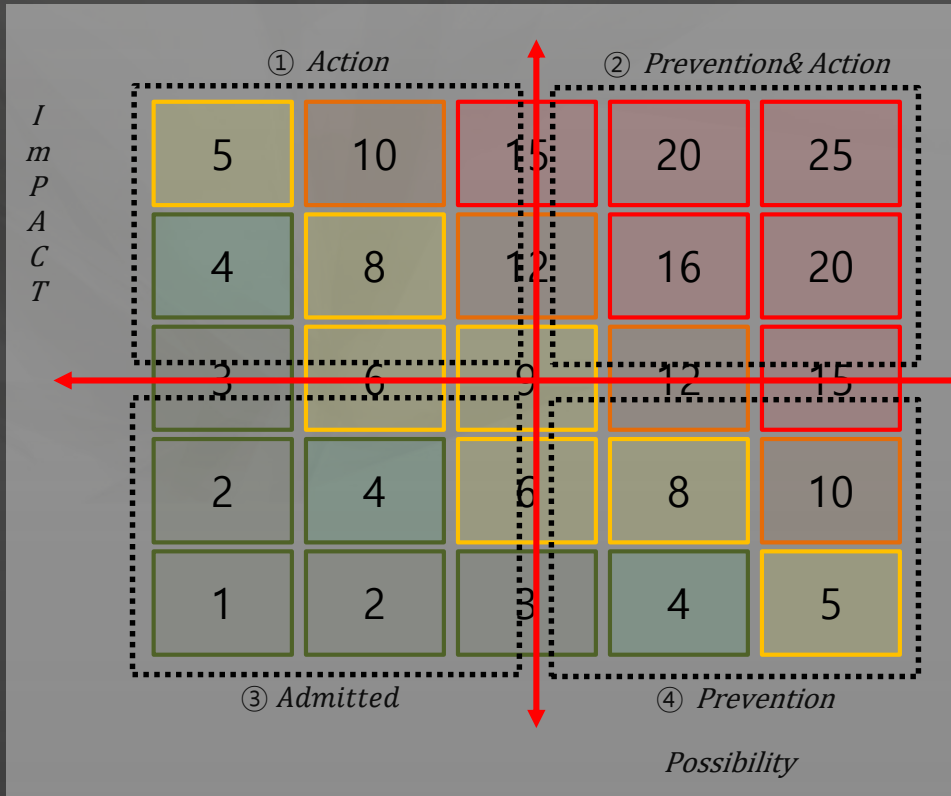
5 cm

The 3rd Process



The 4th process

Risk Assessment



The 5th Process



Jellyfish Makes Stop Running

Economic Damage

0.75_M

(USD)

Restoration Costs

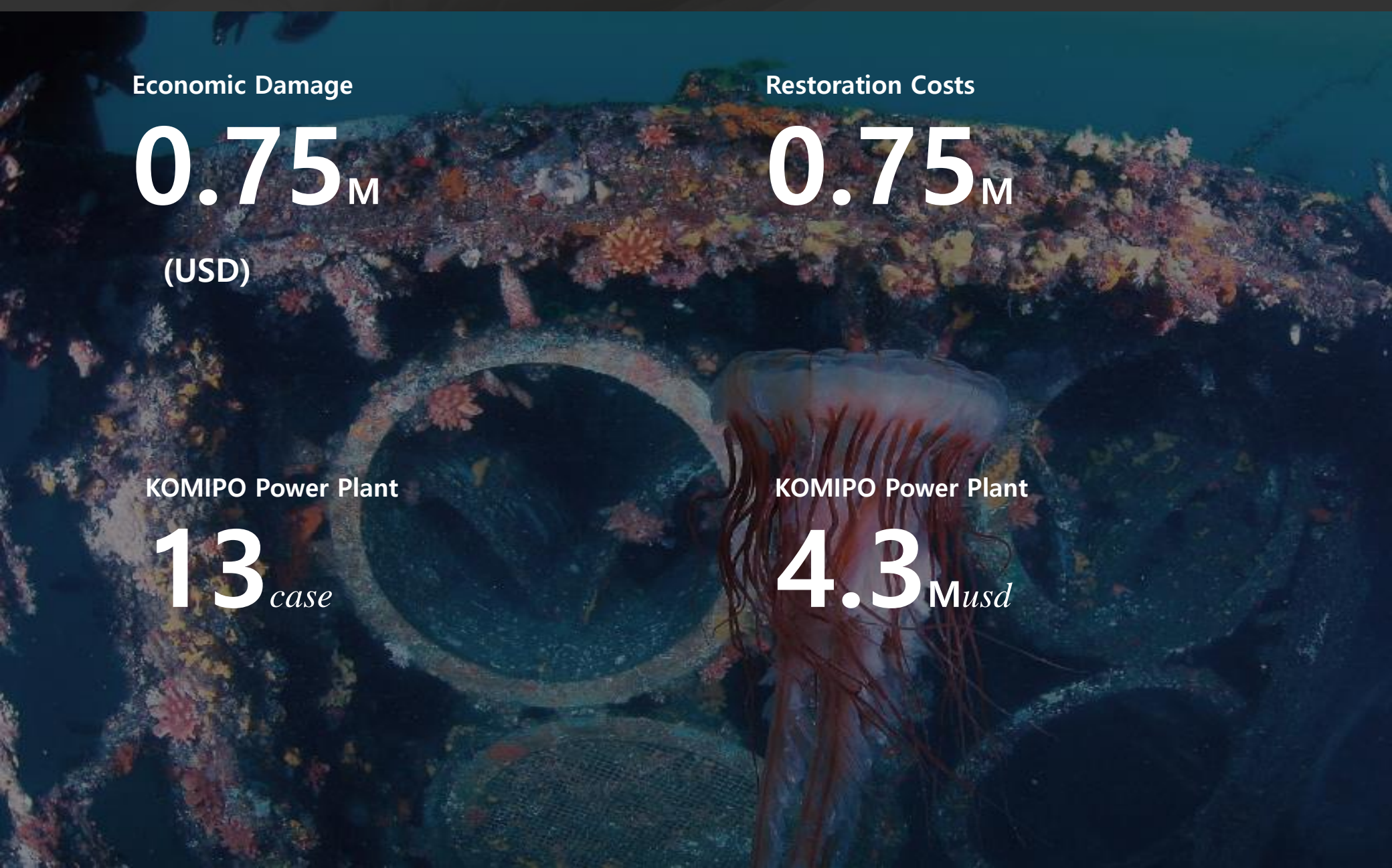
0.75_M

KOMIPO Power Plant

13_{case}

KOMIPO Power Plant

4.3_{Musd}



Adaptation Policy



Climate Change Risk

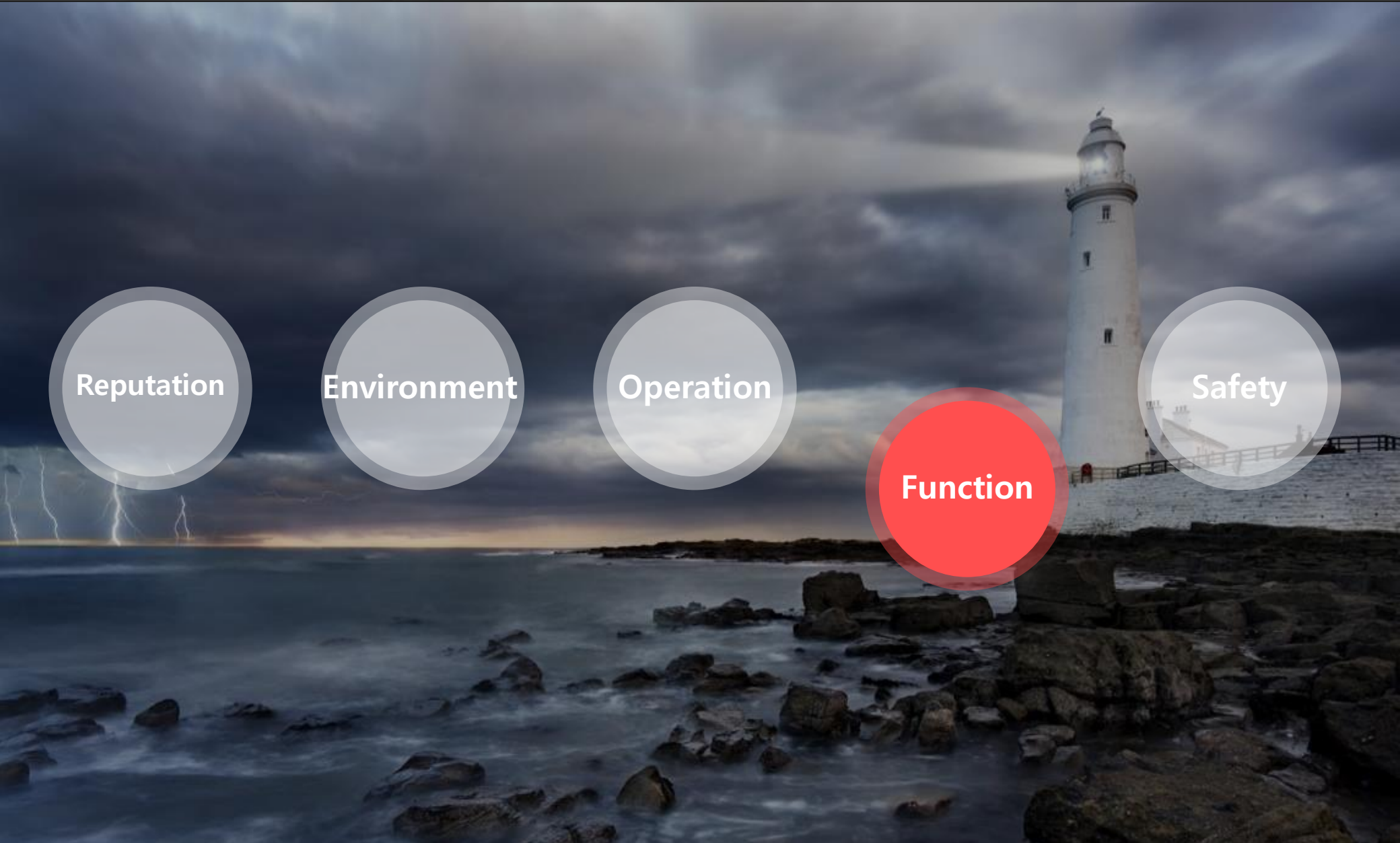
Reputation

Environment

Operation

Function

Safety



Climate Change Leadership

Governance

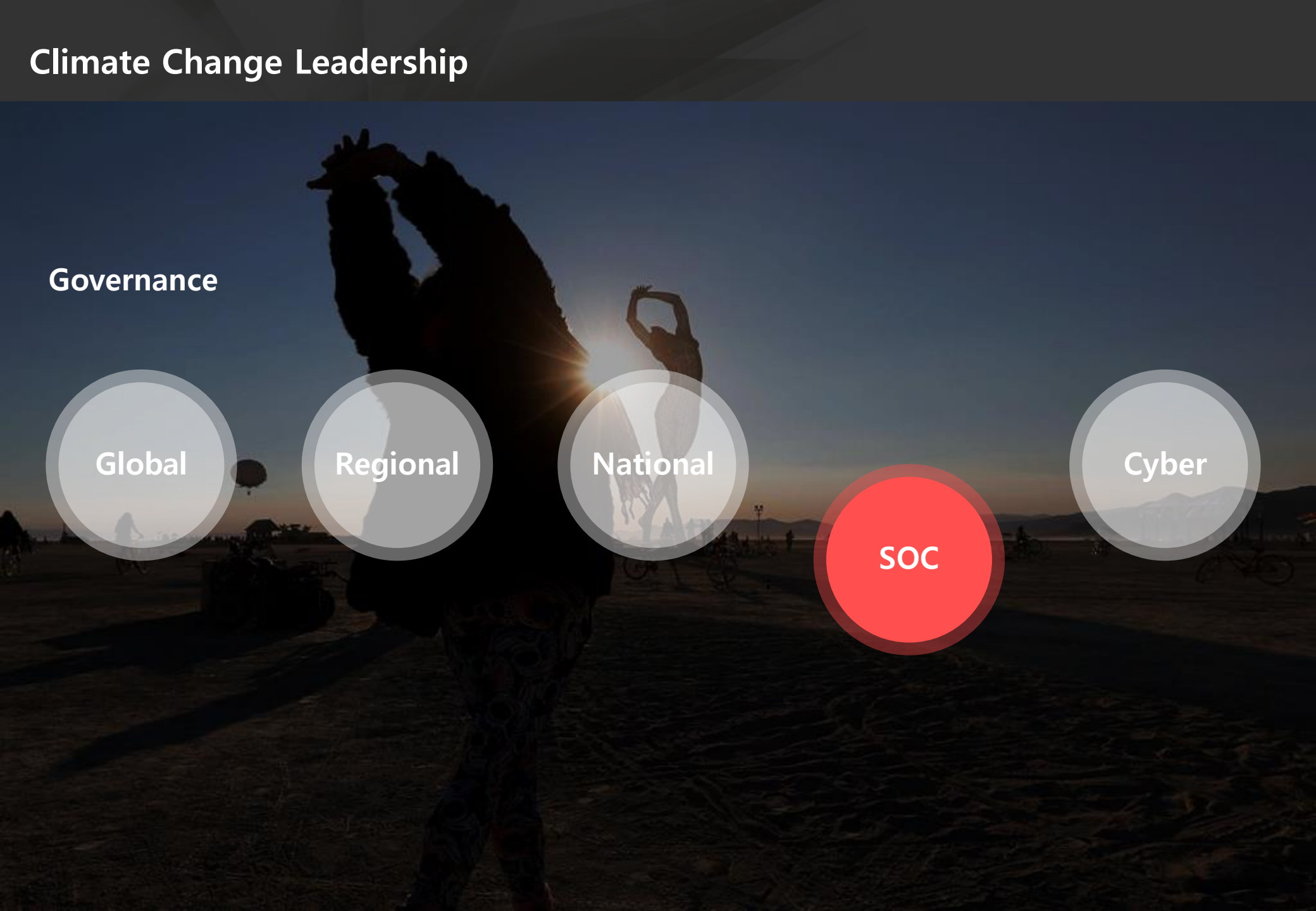
Global

Regional

National

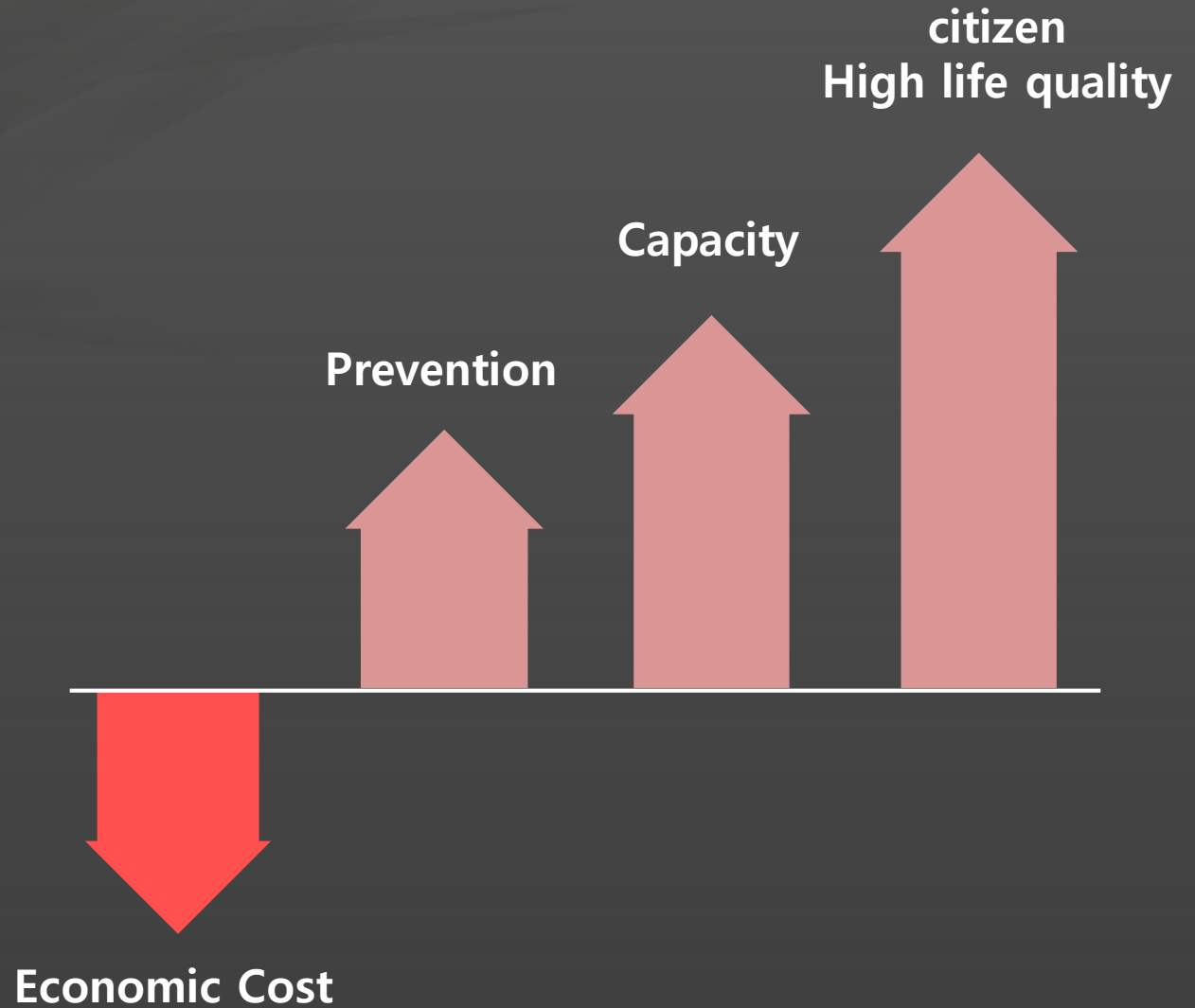
SOC

Cyber



Climate Change Adaptation

Master Plan



Sustainable Development



Opportunity

Decoupling

Risk



한국생산성본부
KOREA PRODUCTIVITY CENTER

Contact Information

Sustainable Management Center

YunRa Choi

yurchoi@kpc.or.kr