KEY POINTS

Climate Vulnerability Monitor, 3rd Edition (2022)

3rd Edition CVM3

Economic and Financial Impacts

Decreased GDP per capita

Below 2.0˚C scenario, economic losses measured in deviation of GDP per capita growth remain at a low level, between **-10% and 0%** deviation compared to the baseline

Doubling of Negative Consequences

On average, across all continents, the additional 0.5˚C of warming rising from 1.5˚C to 2.0˚C would lead to more than a doubling in the negative consequences of climate change on incomes

Accelerating Inflation

Up to **66% higher** at 2˚C than 1.5˚C

Higher Interest Rates

Median interest rates could climb above **0.65%** in Asia and Europe

Over 10% Reduction in Annual GDP Growth per capita

Economic losses from climate change to exceed **10%** reductions to annual GDP per capita growth for entire macro regions (Asia, Europe) by end-of-century in a no climate action scenario. For example, Europe consistently sees the largest relative estimated losses to GDP per capita growth, with spillover effects globally

Loss of Labor Hours

Highest loss projected in the warmest latitudes (Central Africa, West Africa, South Asia, and Southeast Asia)

Food Security at Risk

Extreme Surface Temperatures

Temperatures are higher than they have ever been in the last **125 000 years**

Droughts

Drought events per 20 years to increase 4-8 fold at 1.5˚C, 8-12 fold below 2.0˚C, and **12-14 fold** for the long-term no climate action scenario

Extreme Precipitation

Extreme precipitation projected to increase by 4%-8% at 1.5˚C, 3%-8% below 2.0˚C, and **4%-22%** for the long-term no climate action scenario

Food Supply and Income

600 million farmers globally will be affected, **90%** of which are small-holder and subsistence farmers

Severe Food Insecurity

linked to heatwaves will increase by **12.8 percentage points** globally if no climate action is taken. This increase would be limited to 1.9 percentage points if global temperatures are limited to 2˚C.

Drought Events in All Regions of the World

are between 5-11 times more frequent in occurrence by 2050 in a below 2°C scenario compared with the recent past. But they would be 8-13 times more frequent by the end of century in a no climate action scenario

Heavier Rainfall for Tropical Cyclones

A high warming scenario world will see 20% heavier rainfall for all tropical cyclones, making less intense storms much more destructive than now

Health Impacts

Heat-related Deaths

of people over 65 years of age could increase by **1,540%** by the end of the century if no climate action is taken, reaching **3.4** million deaths annually.

Global Deaths

91% of the projected increase in heat-related deaths could be avoided by limiting global mean temperature increase to 1.5˚C, against just 56% avoided if temperatures are allowed to rise to just below 2˚C.

3.35 million Heat Deaths among Vulnerable Age Groups

Heat deaths among vulnerable age groups alone would reach as much as **3.35 million** annually by the end of the century if no climate action is taken.

Almost 1 Million Additional Heat-related Deaths by 2090 in India

Without accelerated climate change adaptation and mitigation, India alone could see almost **1 million** additional heat-related deaths by 2090.

Exposure to Days of High Wildfire Danger

is projected to increase by **8.5%** at 1.5˚C. This could triple by end of the century if no action is taken.

Exposure to life-threatening heatwaves

Exposure of vulnerable age groups to life-threatening heatwaves could increase by **350%** with temperatures rising to 1.5°C. By the end of the century, this could rise further to **2,510%** if temperatures rise to just below 2°C, and to **6,310%** if no climate action is taken.

218% More Person-Hours Exposed to Heat Stress During Phsiycal Activity

if no climate action is taken, posing at least moderate heat stress risk during physical activity of moderate intensity by the end of the century. These at-risk person-hours could be halved by limiting temperature rise to 1.5°C.

4.75 Trillion More Person-Hours Exposed to Heat Stress During Physical Activity

at just 1.5°C of warming, exceeding moderate heat stress risk during physical activity of moderate intensity.

20% of Hours of Heavy Physical Labor Lost

by end of the century if no action is taken. Under a 1.5˚C scenario, this loss would be **7.6%.**

Labour Losses Affect Warmer Latitudes Most

The highest increases in the loss of labour hours are located in the planet's warmest latitudes – Central Africa, West Africa, South Asia, and Southeast Asia.

Dengue Transmission

The number of countries with conditions suitable for dengue is projected to increase by as much as **22%** by end of century. This increase would be just **4%** if temperature rise is limited to 1.5°C.

Re-emergence of Dengue in European Mediterranean

Risk of Dengue Re-emergence in the European Mediterranean (including Greece, Italy and Spain) is projected to be at risk of re-emergence of dengue transmission by the end of the century if no climate action is taken.

Dengue Conditions

77% of the countries that could potentially develop suitable conditions for mosquito borne illnesses like dengue this century could be avoided if temperatures are capped at 1.5°C.

Malaria Outbreaks

As temperatures rise to 1.5°C in the coming decade, **12%** of the areas with no historic malaria suitability will become newly suitable for the transmission of this tropical disease.

Vibrio[1] Transmission

The global coastal area suitable for transmission of Vibrio is projected to increase by **103%** if no action is taken. This falls to **12%** at 1.5˚C

Baltic Coastline

As much as **100%** of the Baltic coastal waters could become suitable for the transmission of Vibrio bacteria, which is responsible for severe gastroenteritis, wound infections, ear infections and life-threatening septicaemia.

1 Billion Additional People at Risk of Vibrio Infections

Without climate action, more than **1 billion** additional people would be put at risk of Vibrio transmission by 2090

Current warming of around 1.1°C is already leading to climate impacts with negative effects for people's health, economies and habitats across the world

[1] Vibrio: a water-borne bacterium of a group that includes some pathogenic kinds that cause cholera, gastroenteritis, and septicaemia