

# Did you know...

## EMISSIONS

... Greenhouse gases differ by origin and chemical composition, and by their impacts on the climate system. Methane (CH<sub>4</sub>) is much more powerful than carbon dioxide (CO<sub>2</sub>), and nitrous oxide (N<sub>2</sub>O) is more powerful than methane.

... The major greenhouse gas in Palestine, like in the rest of the world, is carbon dioxide, which represents more than half of all emissions. The energy sector – transportation and power generation – produces almost 2 million tonnes of emissions of Palestine's estimated total of 3.5 million tonnes. Poor waste management is a major source of methane emissions in Palestine.

... By 2050, the population of 4.5 million people in Palestine is expected to double. In turn, population growth is closely correlated with growth in energy needs, food and cement production and waste generation – all of which contribute to greenhouse gas emissions. The total greenhouse gas emissions in Palestine may grow to 8-18 million tonnes by 2050.

## ADAPTATION

... Under the mid-range scenario, air temperatures across Palestine are likely to increase by 1°C by 2025, 2°C by 2055 and 3°C by 2090.

... According to some projections, rainfall amounts and intensity will increase and cause flooding. Other projections indicate a 15-30% decrease in rainfall by 2090 while dry periods lengthen. Greater aridity and more frequent droughts may cause deserts to expand and may reduce recharge of groundwater.

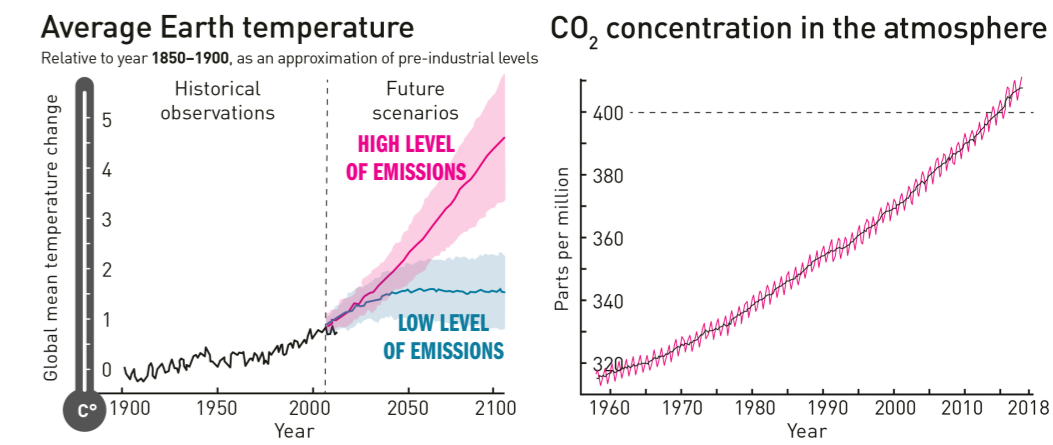
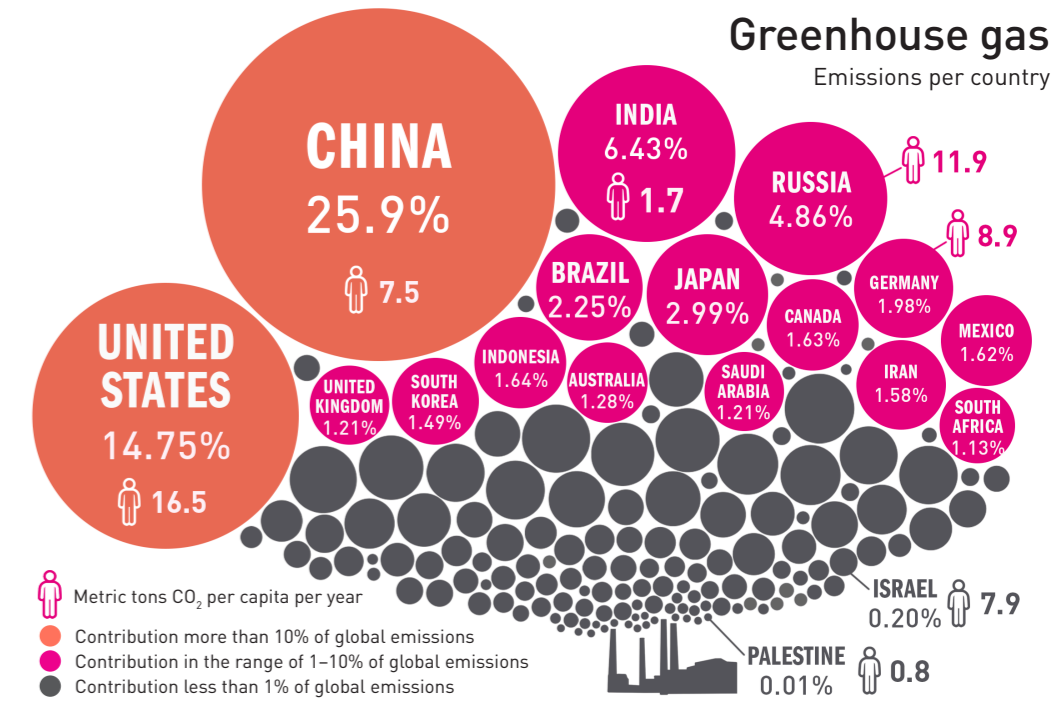
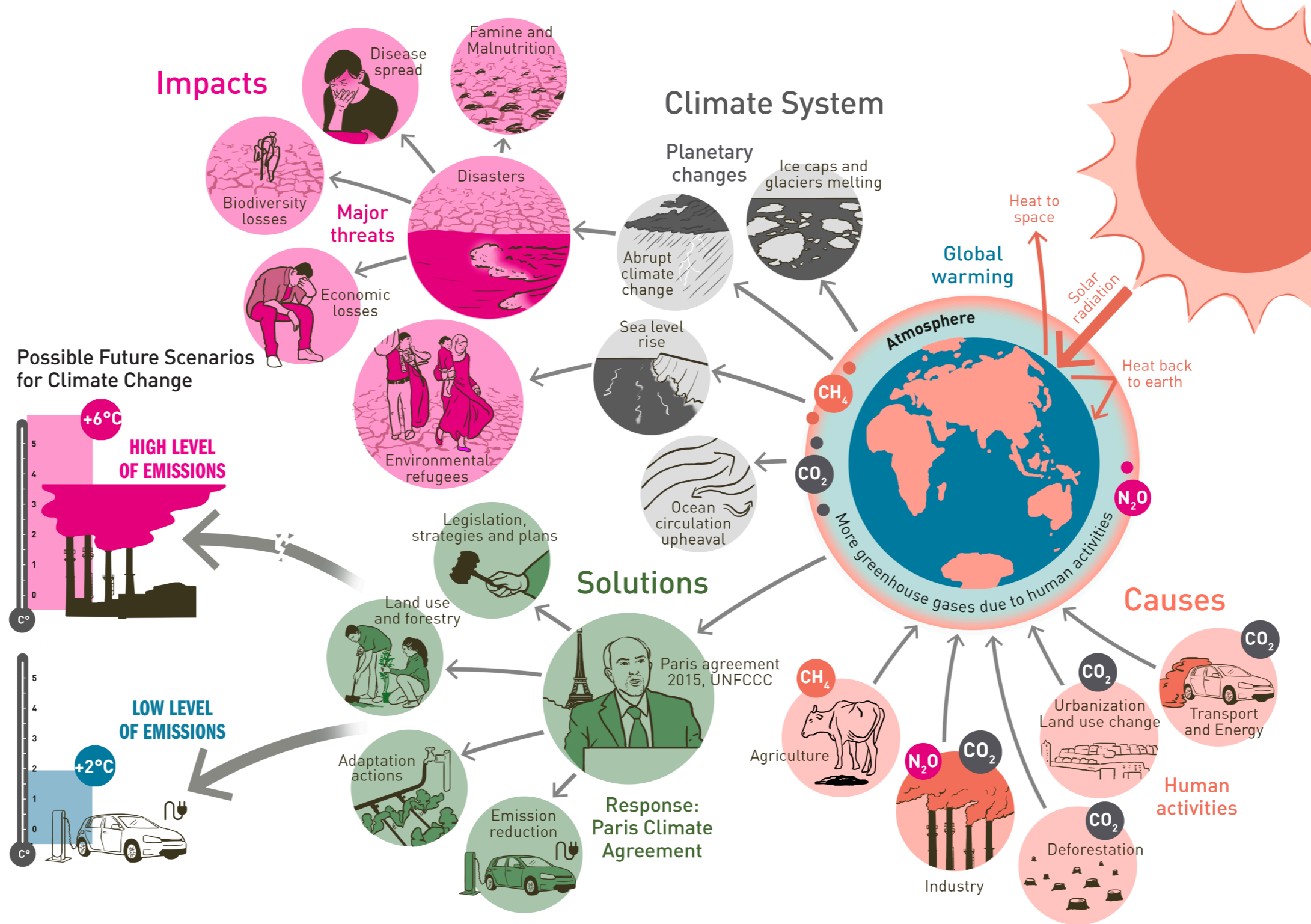
... Fish stock and catch in the Mediterranean may decline, and coastal erosion may intensify due to sea level rise.

... Densely populated areas might be affected by diminished groundwater quality and supply, and by heat, drought and flood impacts on the population and infrastructure.

... Estimated costs of climate adaptation measures range from US \$10 to US \$15 million in biodiversity, up to US \$1 billion in the agriculture and water sectors. Total cost of climate adaptation is estimated at US \$3.5 billion for 10 years.

## CREDITS & SOURCES

- Online information sources**
- Palestine Museum of Natural History: <https://www.palestinemuseum.org>
  - Environment Quality Authority of Palestine: <http://environment.pna.ps>
  - Intergovernmental Panel on Climate Change: <http://www.ipcc.ch>
  - United Nations Framework Convention on Climate Change: <https://unfccc.int/>
- Selected publications**
- National Adaptation Plan to Climate Change in Palestine (2016). Environment Quality Authority
  - Initial National Communication to the United Nations Framework Convention on Climate Change (2016). Environment Quality Authority
  - Climate Change Adaptation Strategy and Programme of Action for the Palestinian Authority (2010). UNDP and Environment Quality Authority
  - Atlas of Palestine (2015). The Applied Research Institute of Jerusalem (ARIJ)
  - State of the Environment in Palestine (2016). The Applied Research Institute of Jerusalem (ARIJ)
  - Analysis of the climatic variability and its environmental impacts across Palestine (2012). The Applied Research Institute of Jerusalem (ARIJ)
  - State of Palestine. Fifth National Report to the Convention on Biological Diversity (2015)



# Climate Change

Global processes and effects

## CLIMATE CHANGE AND THE ENVIRONMENT IN PALESTINE