

RISE IN SEA LEVEL AND IMPACTS ON NATURAL RESOURCES IN VIETNAM

Group 9

Introduction

Vietnam

MAP



Coastal area

Extensive area of coastal marine areas and islands, and the freshwater with abundant aquatic resources

Free trade agreement

In 2015, Vietnam also entered into a free trade agreement with other countries, especially the EU

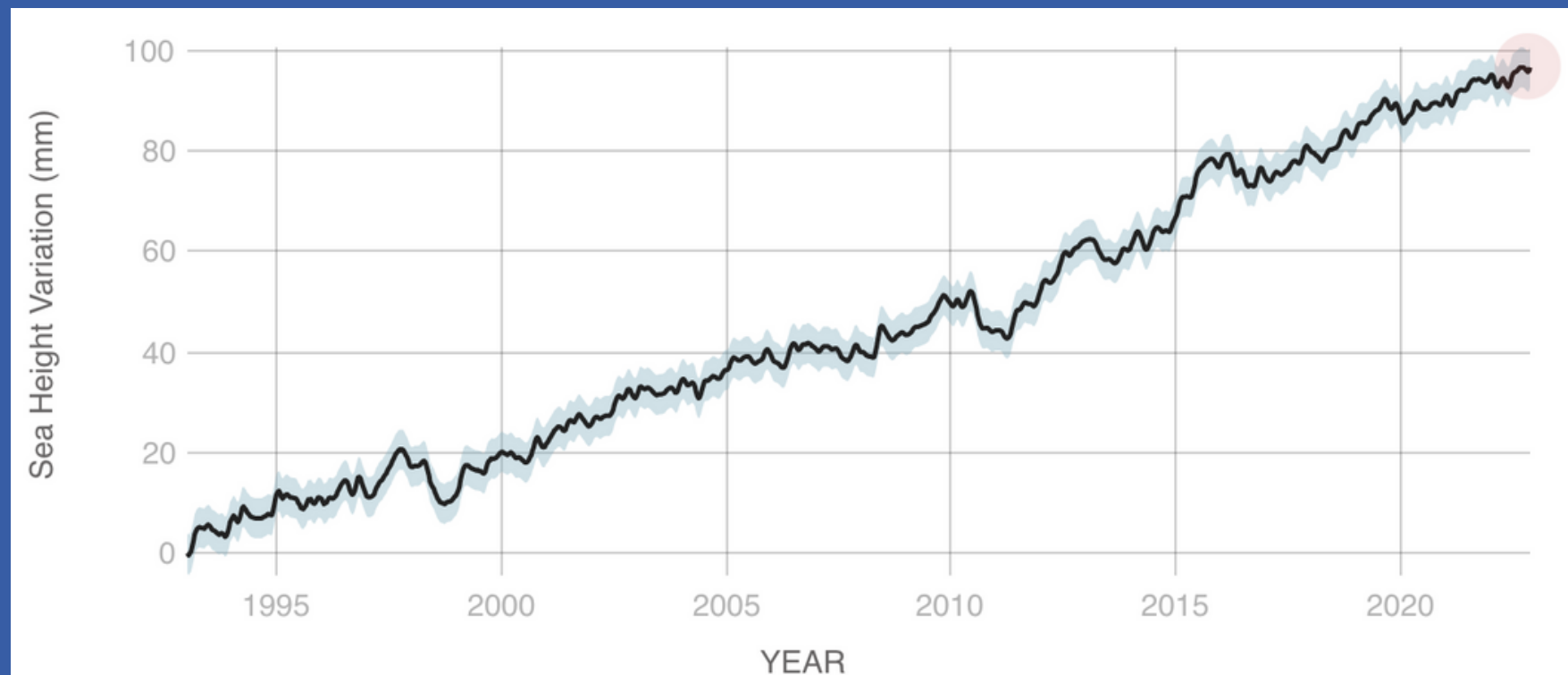
aquaculture producer

In 2017, Vietnam became the world's fourth-largest aquaculture producer, with 3.84 million tonnes of aquaculture products, mainly shrimp and pangasius.

Introduction Vietnam



Vietnam: SEA LEVEL



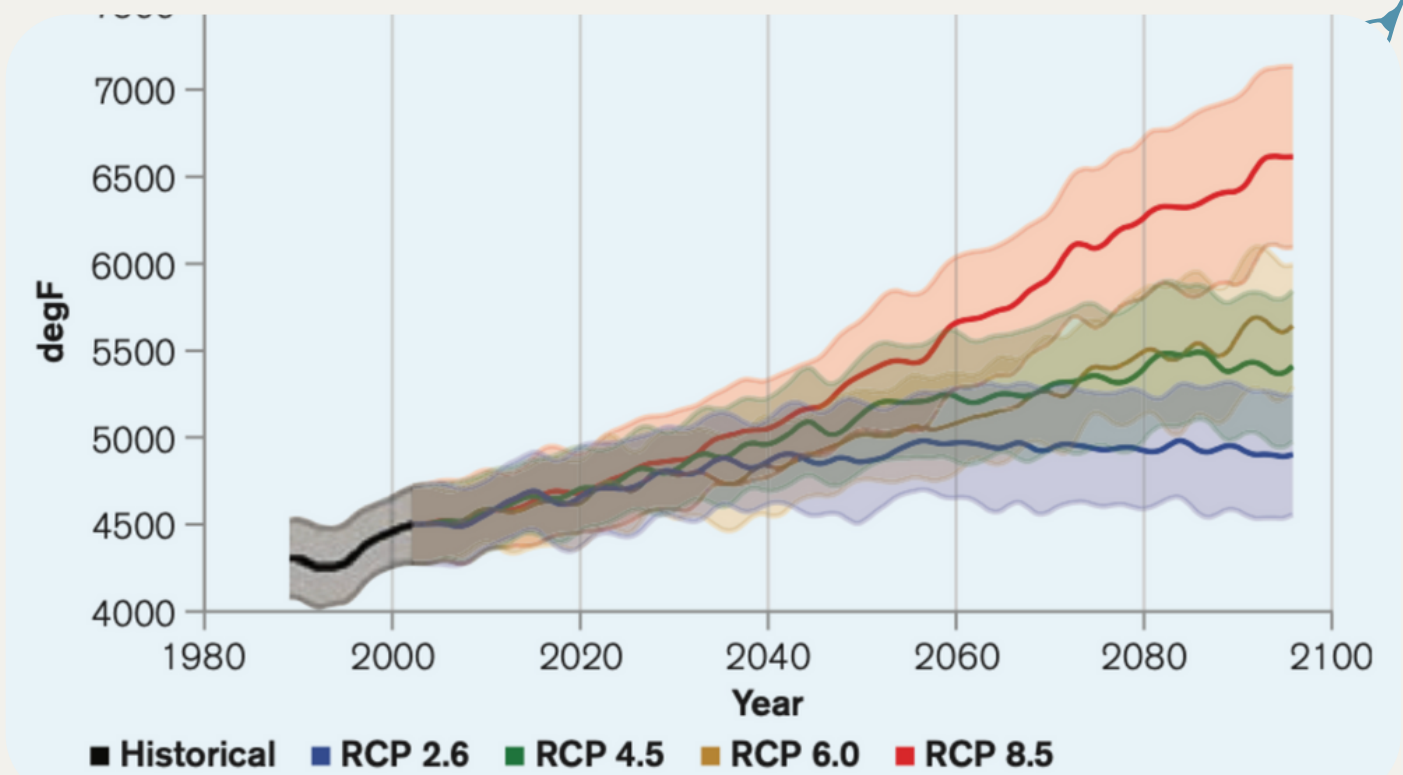
The sea level has dramatically risen, which creates more water that increases the sea level around the extensive coastline. The sea level has a massive negative impact on the natural resources of Vietnam, such as water, forest, land, and agricultural products, specifically in the aquaculture and fisheries industries that predominantly account for employment and the GDP.

Key issues and Challenges on natural resources

ENERGY

Vietnam has significant energy resources, including crude oil, natural gas, and coal, but increasing temperatures due to climate change will negatively affect labor productivity and household living standards

Additionally, a one-degree increase in ambient temperature can result in a 0.5%–8.5% increase in electricity demand, which strains energy generation systems due to their own cooling requirements, reducing efficiency.



Monthly maximum temperature increases in Vietnam, exceeding 40°C under high emissions pathways, leading to extreme pressure on urban areas and amplified by the urban heat island effect. Cooling buildings will become more necessary, putting pressure on the energy supply and penalizing marginalized groups. Flooding is also a major threat to urban areas in Vietnam, with potential losses of 1%–5% of GDP in Ho Chi Minh City and 0.5%–20% in Hai Phong, depending on the success of adaptation, and affecting the poorest and marginalized communities.



Water, hydropower, and aquaculture with Collapse in marine ecosystem

- The water resources in Vietnam are facing significant pressure due to human activities such as over-utilization of groundwater, land-use changes to aquaculture, and unplanned urban development.
- The rise in sea levels has severe consequences on coastal areas, potentially causing harm to farmlands and forcing millions of individuals residing near the coast to move elsewhere.



Human Health

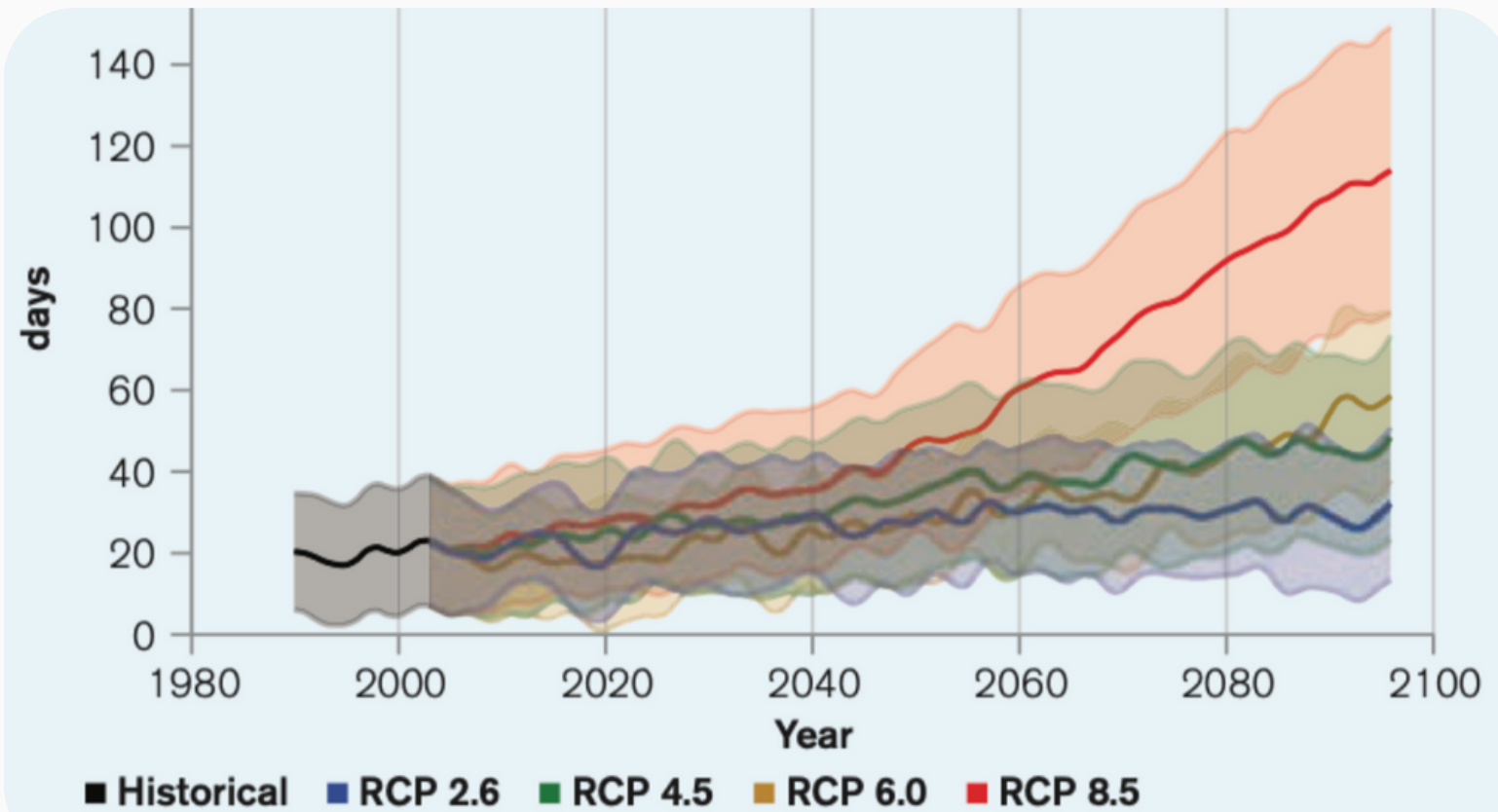
- Including a range of issues such as malnutrition, micronutrient deficiencies, starvation, increased number of hot days, forest fires, and dust storms leading to health complications associated with high temperatures and respiratory diseases.

Agriculture

Climate change is expected to influence food production through direct and indirect effects on crop growth processes.

Climate change threatens multiple stressors on rice production, including high temperatures, saline intrusion, drought, and flood.

However, some of these negative impacts may be partially offset by the benefits of increased atmospheric CO2 concentrations.



The article states that maize is an important food crop and a primary source of feed for Vietnam's poultry and livestock industry. However, maize production is expected to decline due to its sensitivity to high temperatures. The article also raises concerns about potential future climate stressors affecting cash crops such as tea, coffee, pepper, and rubber in Vietnam's Central Highlands region. Specifically, a study in 2015 projects that many key coffee-growing areas in the region will become unsuitable for coffee production under the RCP6.0 emissions pathway.

Policies

1

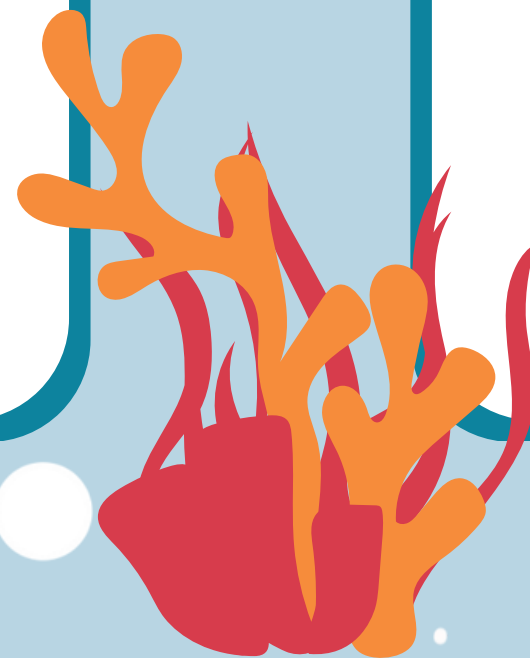
Satisfy energy demand

- Developing renewable energy regulations
 - Power development plans
 - Solar power
 - Wind power
 - Power purchaser
 - Power purchase agreement (PPA)

2

Address pressures on water resources

- Integrated water resources management (IWRM)
 - Used as means of changing water uses and demand
 - Offers greater flexibility and capability



Policies

3

Collapsing of marine ecosystem

- Coastal zone environmental protection
 - Organization structure and legal basis
 - Capacity building
 - Development of national strategies and plans
 - Implementation of coastal projects

4

Increase agricultural productivity

- Nanotechnology in agricultural systems
 - Introduces new chemical agents and delivery mechanisms
 - Increase in agricultural protection through applying agrochemicals
 - Agricultural reform

5

Improvements in human health

- Centers for disease control and prevention (CDC)
 - Provides funding and technical support

Conclusion

Vietnam's background

Long coastal area

Vulnerable to sea level change

Natural resources are significant to GDP

Residence are at risk of becoming climate migrants



Policies

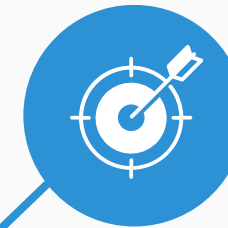
Transition to green energy

Enhance water capacity

Impose laws and national plans

Adopt nanotechnology

Establish medical center



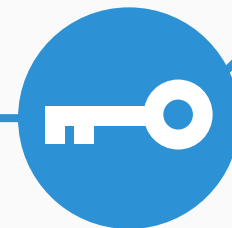
Key issues

Energy supply is pressured

Destruction of marine ecosystems

Negative effects on human health

Food insecurity



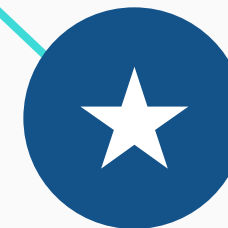
Key challenges on policies

Government subsidies on fishery

Prolonged global warming

High cost

Need participation from private sectors and individuals



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**THANK
YOU!**

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