



# PHILIPPINES

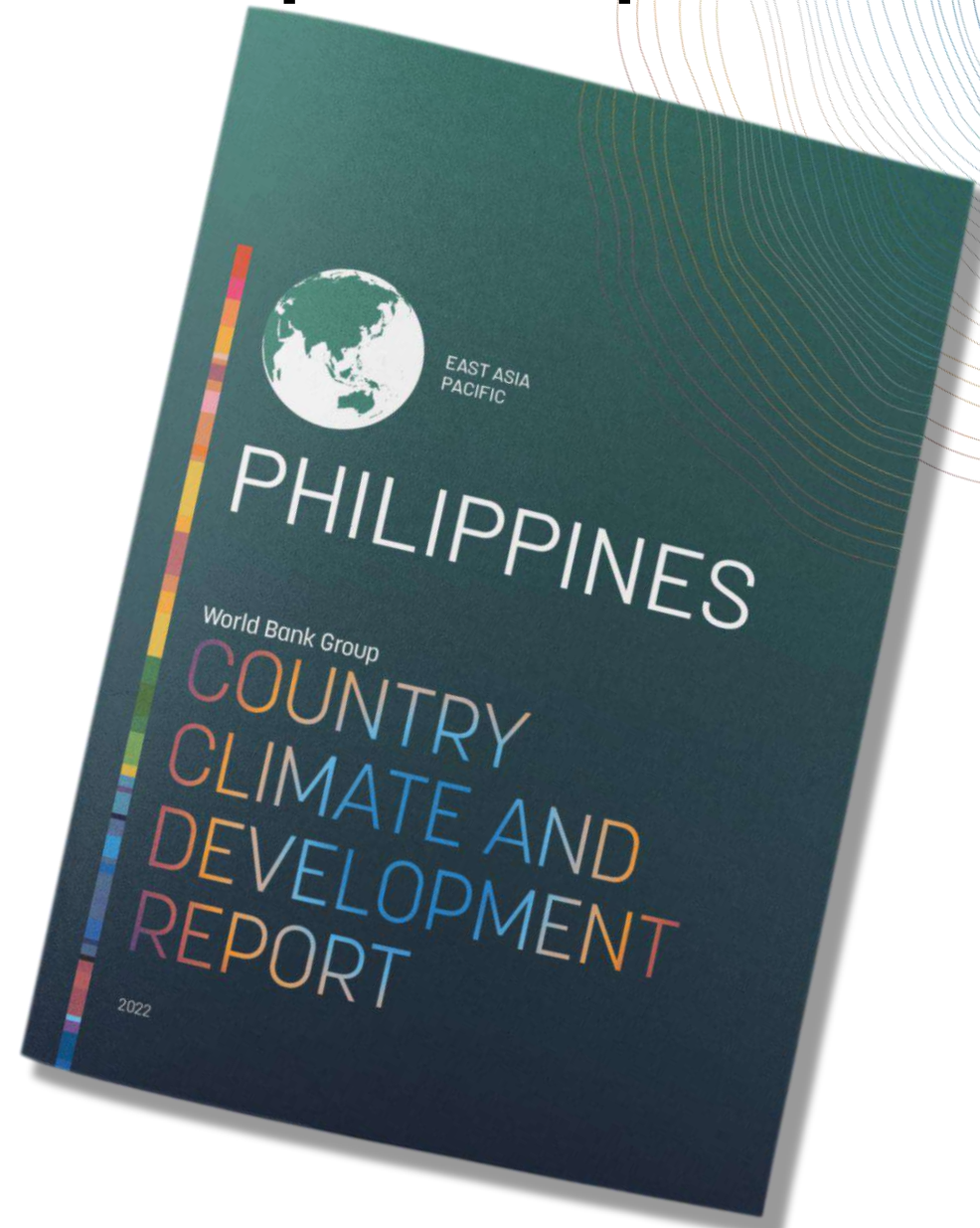
## COUNTRY CLIMATE AND DEVELOPMENT REPORT



# The Philippines Country Climate Development Report

## The Philippines Country Climate Development Report (CCDR)

- Comprehensively analyzes how climate change will affect the country's ability to meet its development goals
- Helps identify opportunities for climate action by both the public and private sectors



# The Philippines CCDR: Approach

- Deep dive selection based on:
- Impact of CC
  - Where people are hardest hit

## Sectoral deep dives

### Agriculture:

- Most vulnerable to CC
  - Temperature/rainfall affect productivity
  - Direct damage from typhoons and floods
- Almost 25% of employment

### Water:

- Most CC impacts act through water
  - Changes in water flows and quality affect irrigation, industry, domestic uses
- Entire population depends on water services

### Energy:

- Main source of emissions
- Must grow to meet increasing demand
  - Energy use affects competitiveness

### Transport:

- Largest fossil fuel user
- Demand growing very rapidly

## Cross-cutting questions

### Social issues/Human capital

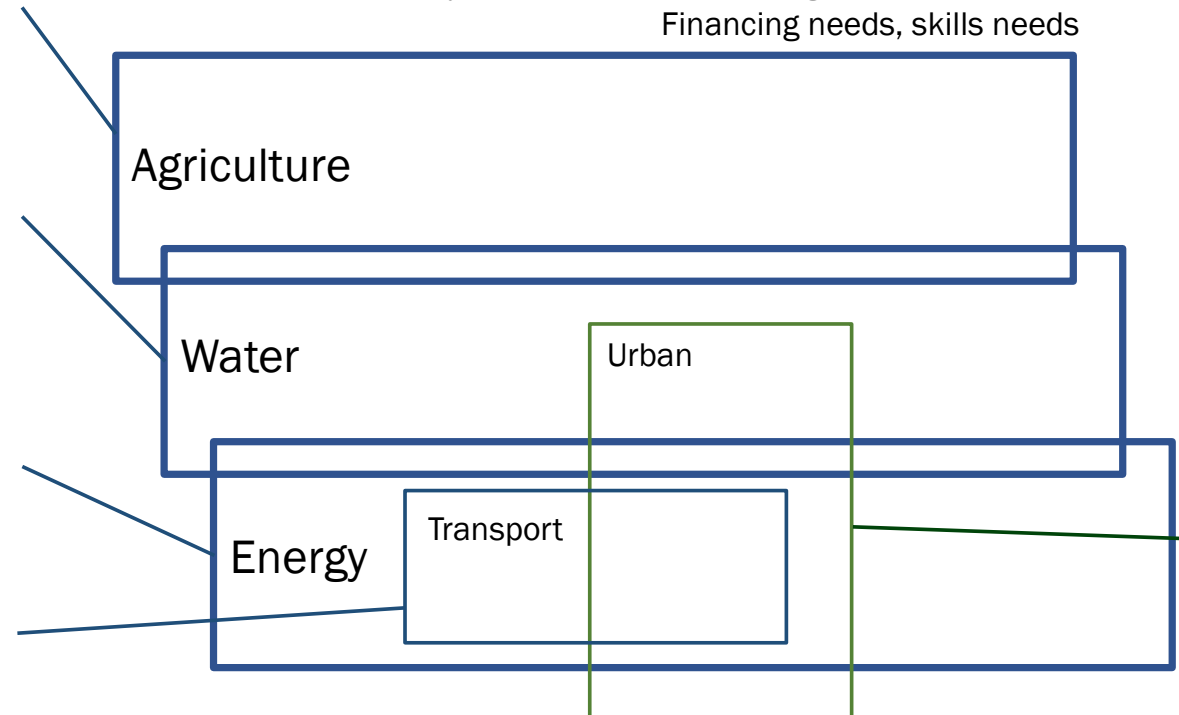
- Who is affected?
- How severely?
- Are they able to respond?
- What obstacles do they face?

### Private sector

- Are climate investments in their interest?
- What obstacles do they face in adopting them?
- Financing needs, skills needs

### Institutions

- Who is responsible?
- Do they have the necessary capabilities and resources?



## Spatial dimension

### Urban areas:

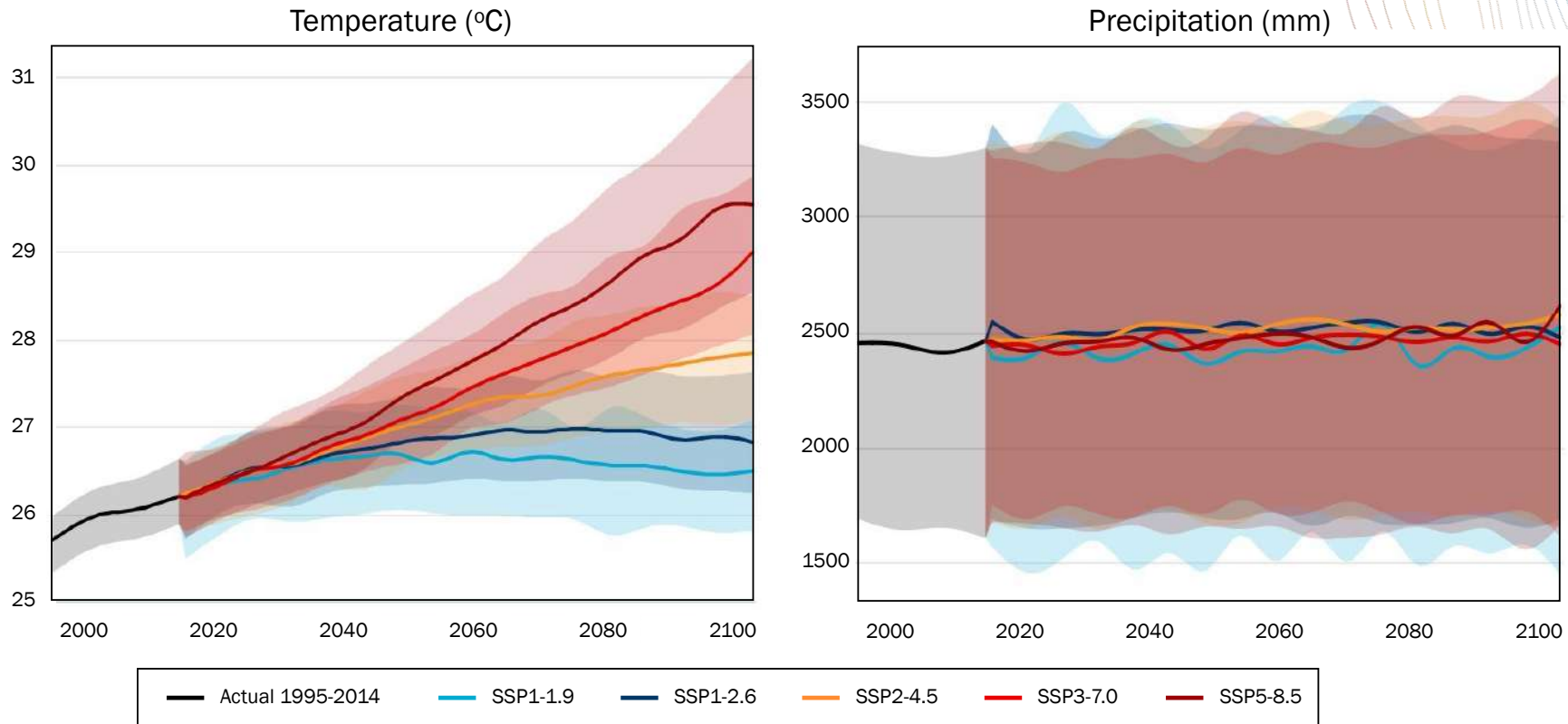
- ~ 50% of population, growing
- Floods, water availability
- Air pollution co-benefits

# Main messages

- Climate change poses major risks for development in the Philippines; Policy inaction would impose substantial economic and human costs, especially for the poor.
- The Philippines has many options to address climate change, which could significantly reduce its impact; these options are feasible and their cost is modest; the private sector must play a large role in climate action, so it's important that the right incentives be in place



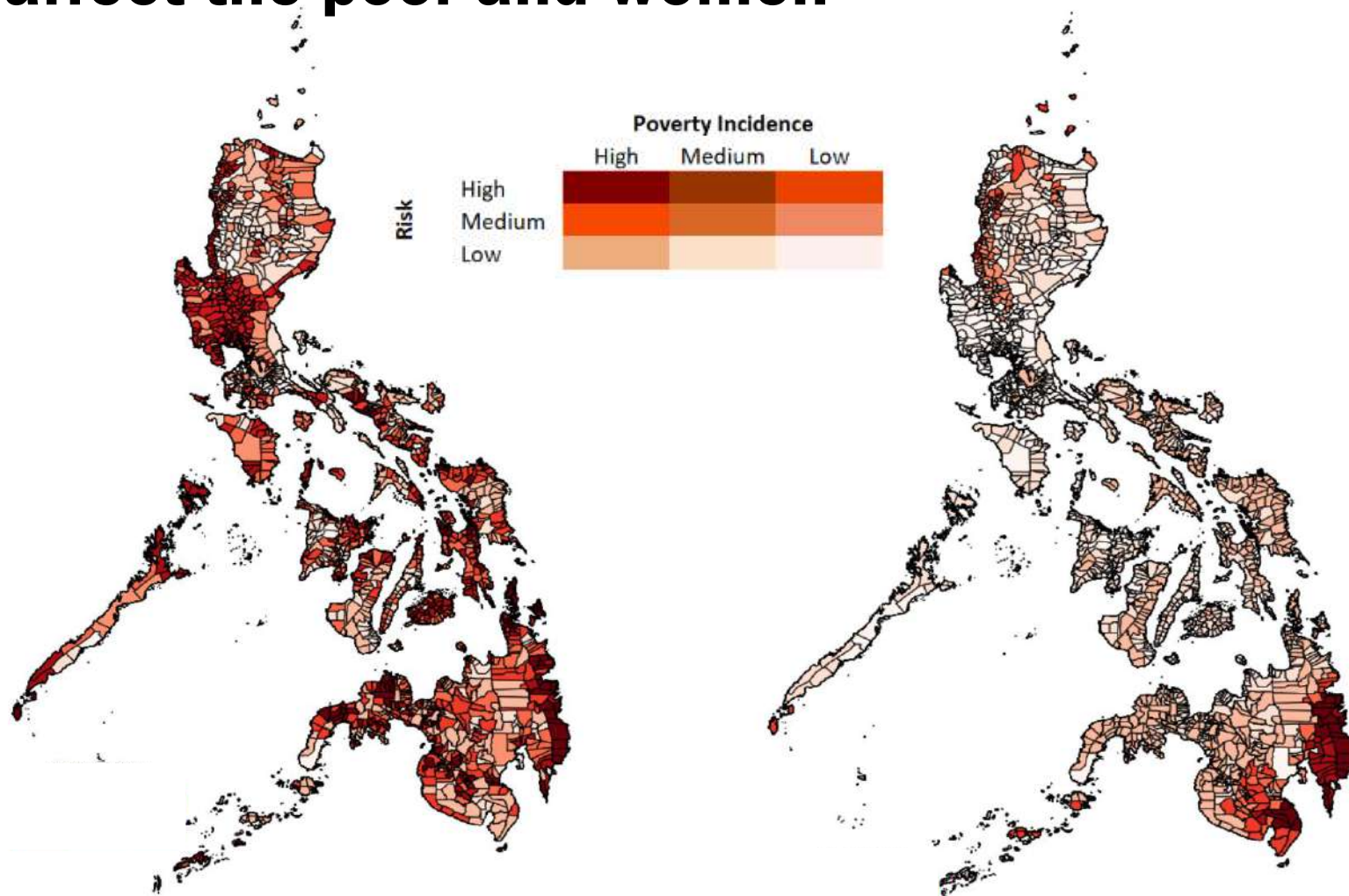
# Climate change will accelerate



- Temperatures have already risen by +0.68C (1951–2015)
- Temperatures will rise an additional 1-3C, depending on the scenario
- Average rainfall will not change much, but rainfall will become more intense and more erratic

# Climate change will affect the poor and women disproportionately

Areas of high poverty often correlate with areas at high risk from climate change



Flood risk

Drought risk

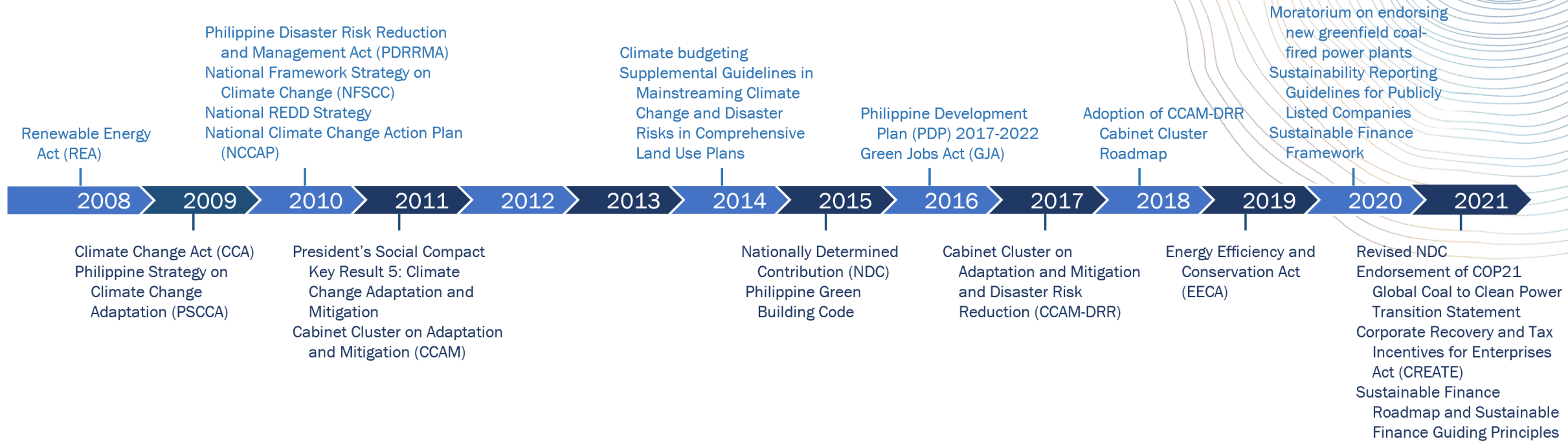


## Adaptation is a priority of the Philippines

- Reducing the risk and damage from extreme events
- Addressing slow-onset events like higher temperatures and sea level rise.



# The Philippines has already taken action on climate change



## Nationally Determined Contribution (NDC):

- 75 percent reduction (2,505 MtCO<sub>2</sub>e) in cumulative emissions 2020-30, relative to projected BAU emissions of 3,340 MtCO<sub>2</sub>e (2.71% unconditional, 72.29% conditional)





# The Philippines has already taken action on climate change

However:

- Responsibilities and authority over climate action is often dispersed and duplicative
- Many policies have been only partially implemented
- Local Government Units (LGUs) are increasingly responsible for climate action, but often lack the capacity and resources to do so effectively

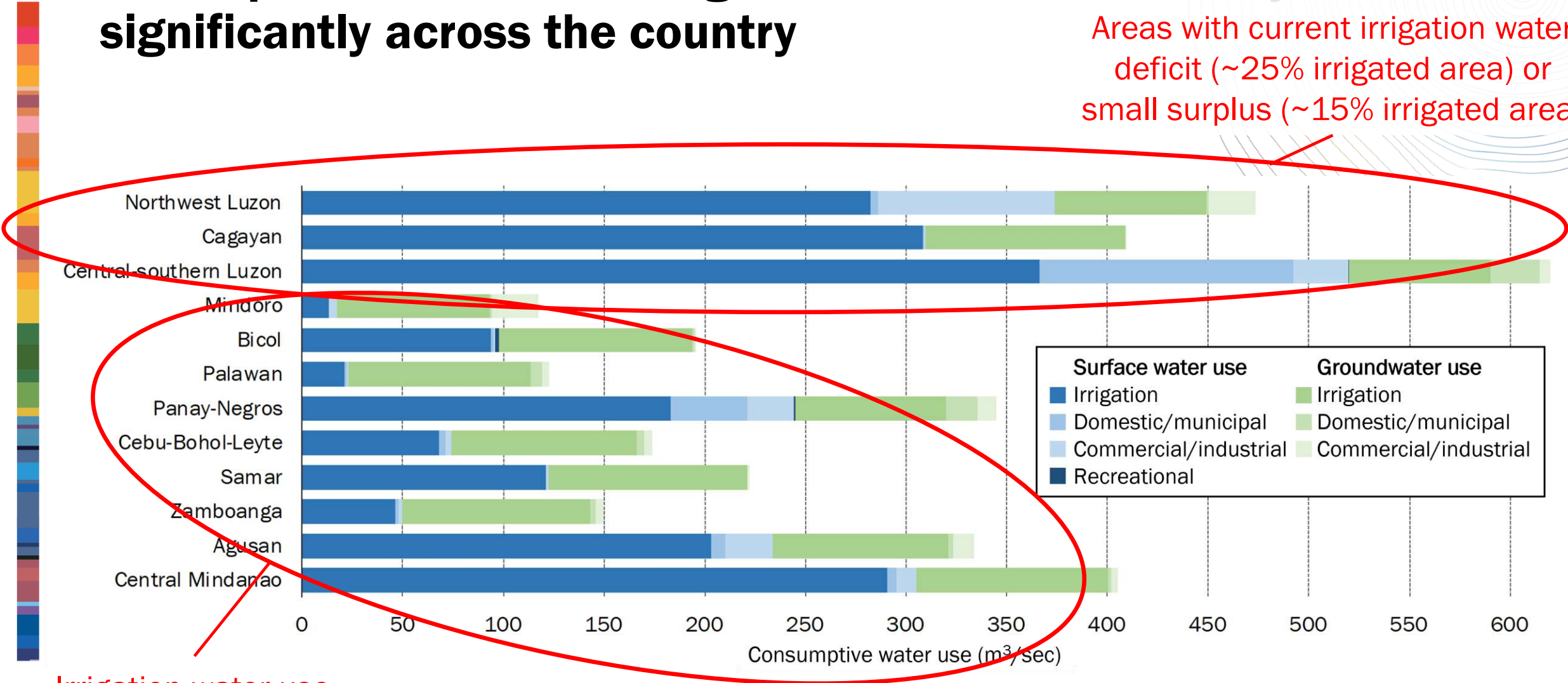
# CCDR Deep Dives

- Water
- Agriculture
- Energy
- Transport
- Urban areas



# The impact of climate change on water users will vary significantly across the country

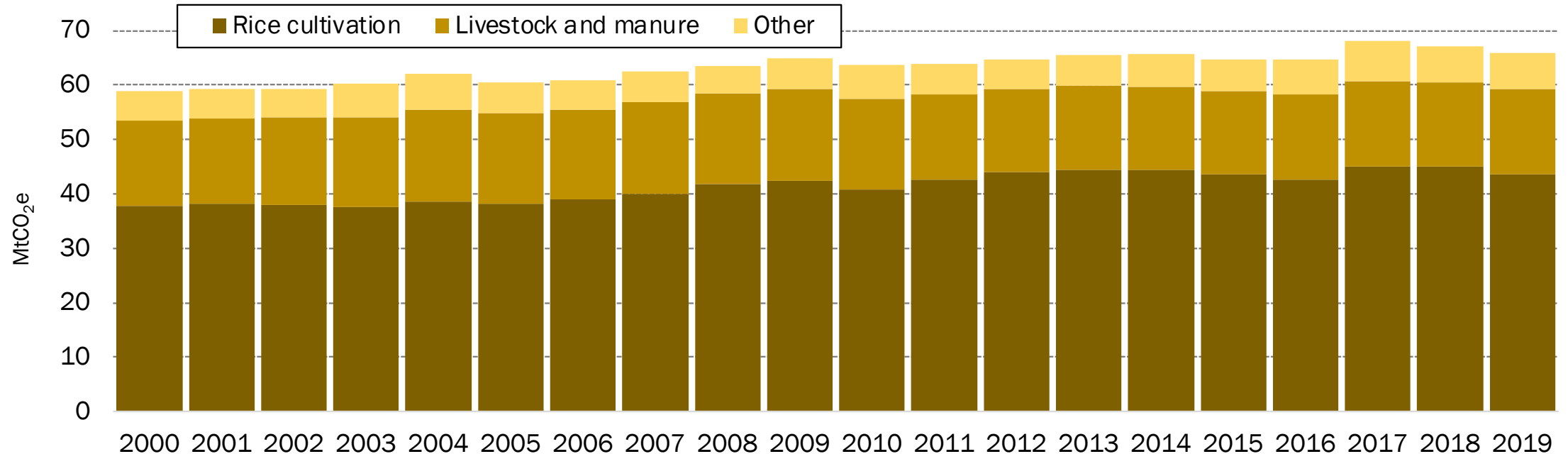
Areas with current irrigation water deficit (~25% irrigated area) or small surplus (~15% irrigated area)



Irrigation water use <20% available flow

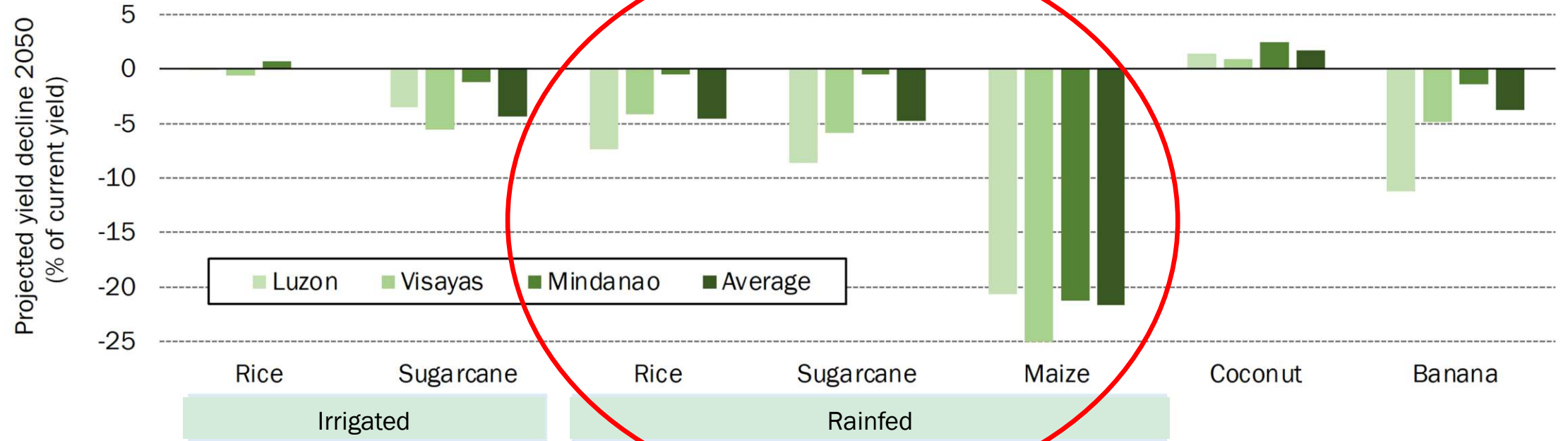


# Agriculture is a significant source of emissions



- About a quarter of Philippines GHG emissions (~65 MtCO<sub>2</sub>e)
- Mostly from irrigated rice and livestock production
- Limited growth

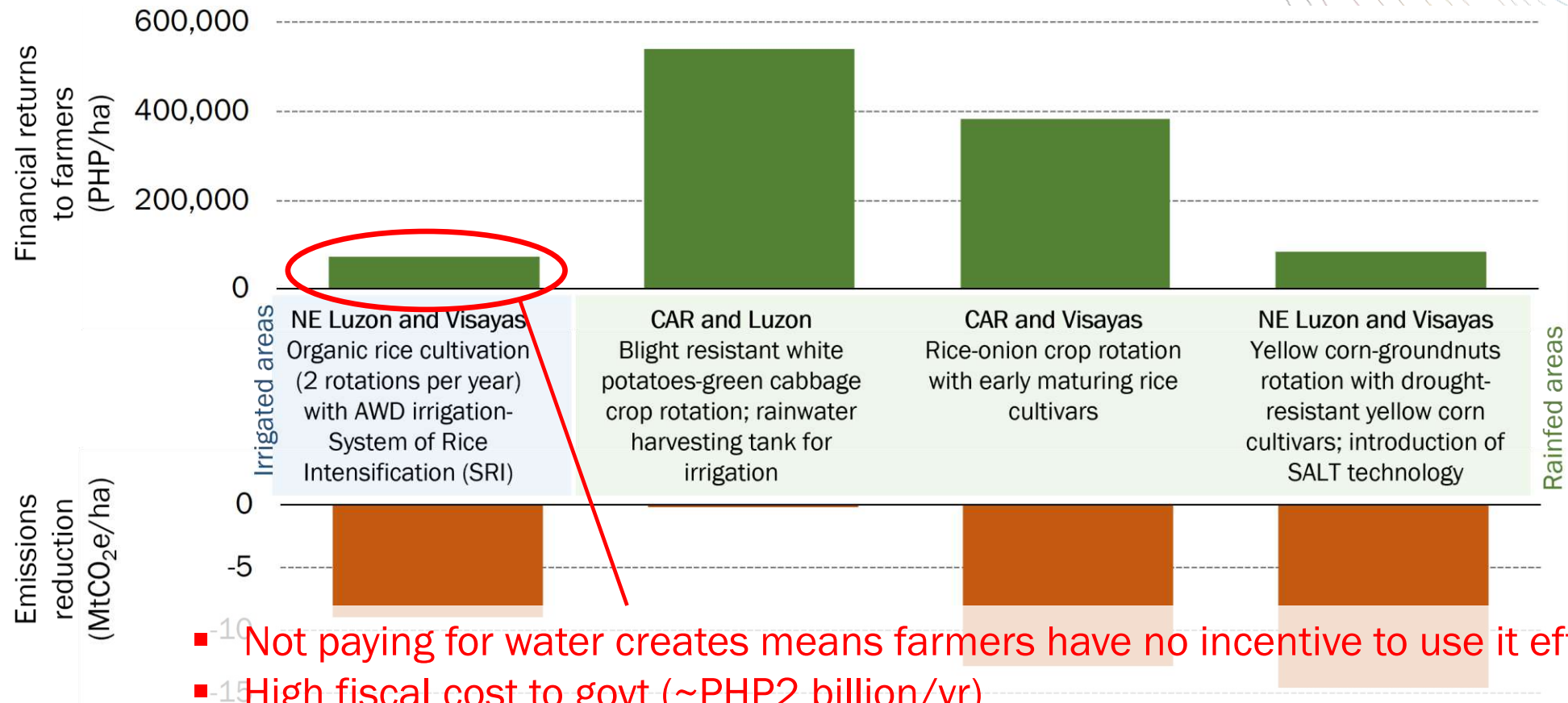
# The productivity of many crops will decline



Rainfed crops will be most affected

# Climate-smart agriculture practices could generate triple wins: higher productivity, higher resilience, lower emissions

- But the attractiveness of climate-smart agriculture practices for Filipino farmers varies

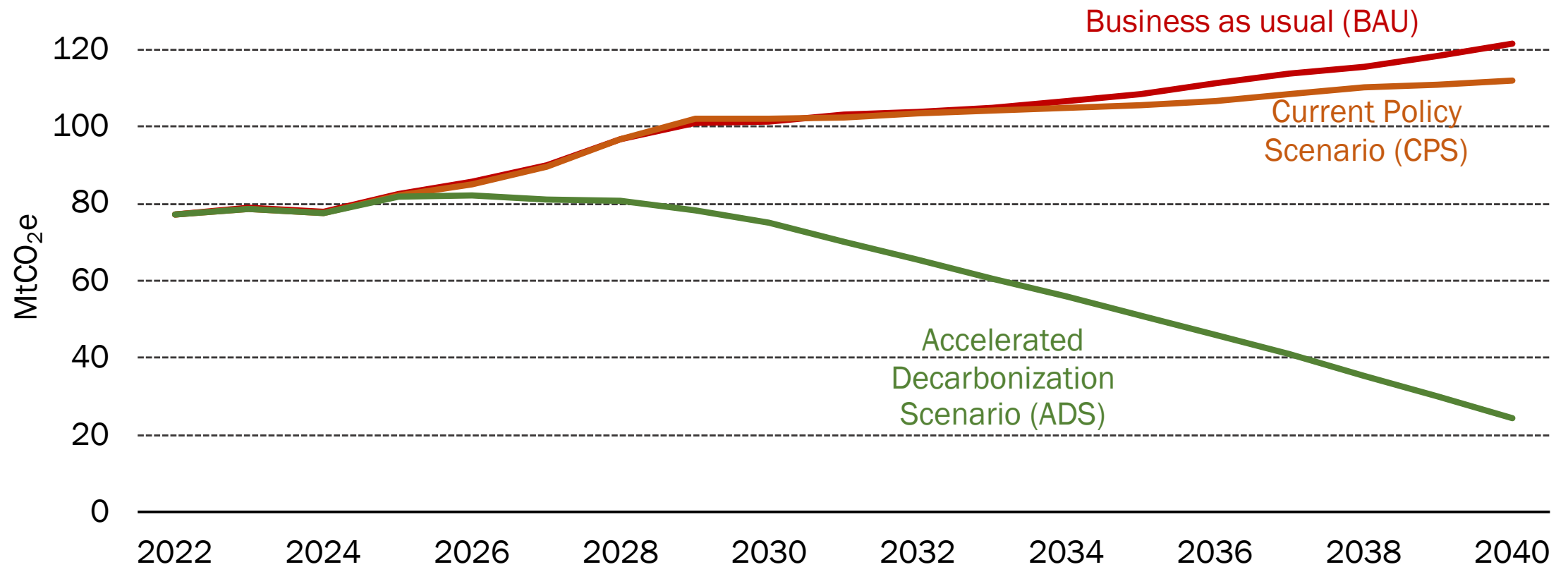


- Not paying for water creates means farmers have no incentive to use it efficiently
- High fiscal cost to govt (~PHP2 billion/yr)
- Difficult to finance irrigation + storage investments

# Energy transition scenarios

- **Business as usual (BAU):** No explicit emissions reduction target.
- **The Current Policy Scenario (CPS)** represents the Government's current ambitions and is aligned with the NDC's commitment by peaking coal power generation by 2030.
- **Accelerated Decarbonization Scenario (ADS)** sets target of 80 percent reduction in annual CO<sub>2</sub> emissions by 2040, compared with BAU

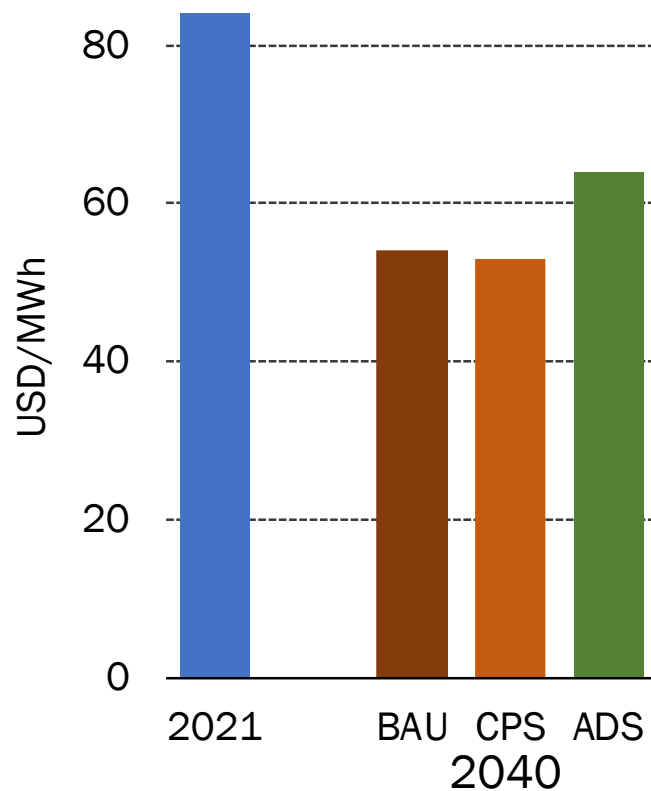
# An energy transition toward a renewable-energy dominated power system will enhance affordability and reduce air pollution



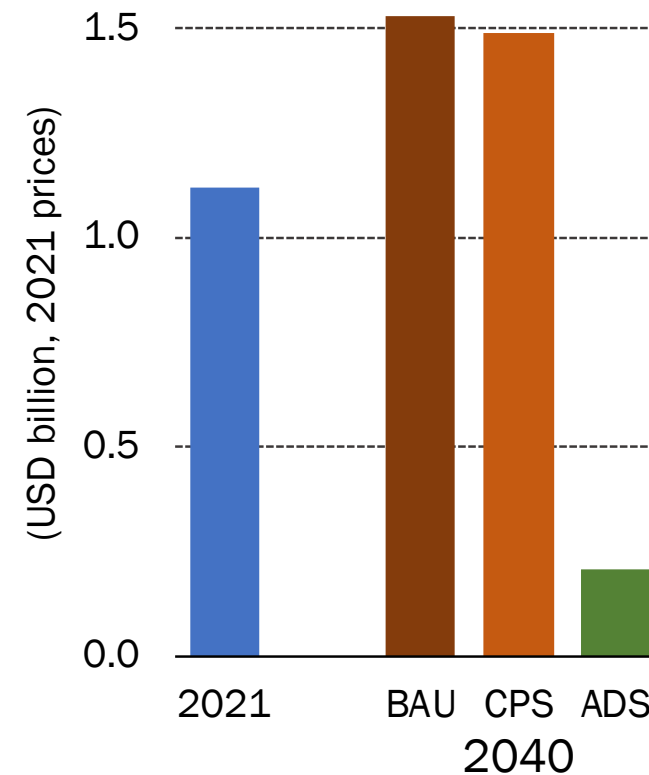


# An energy transition toward a renewable-energy dominated power system will enhance affordability and reduce air pollution

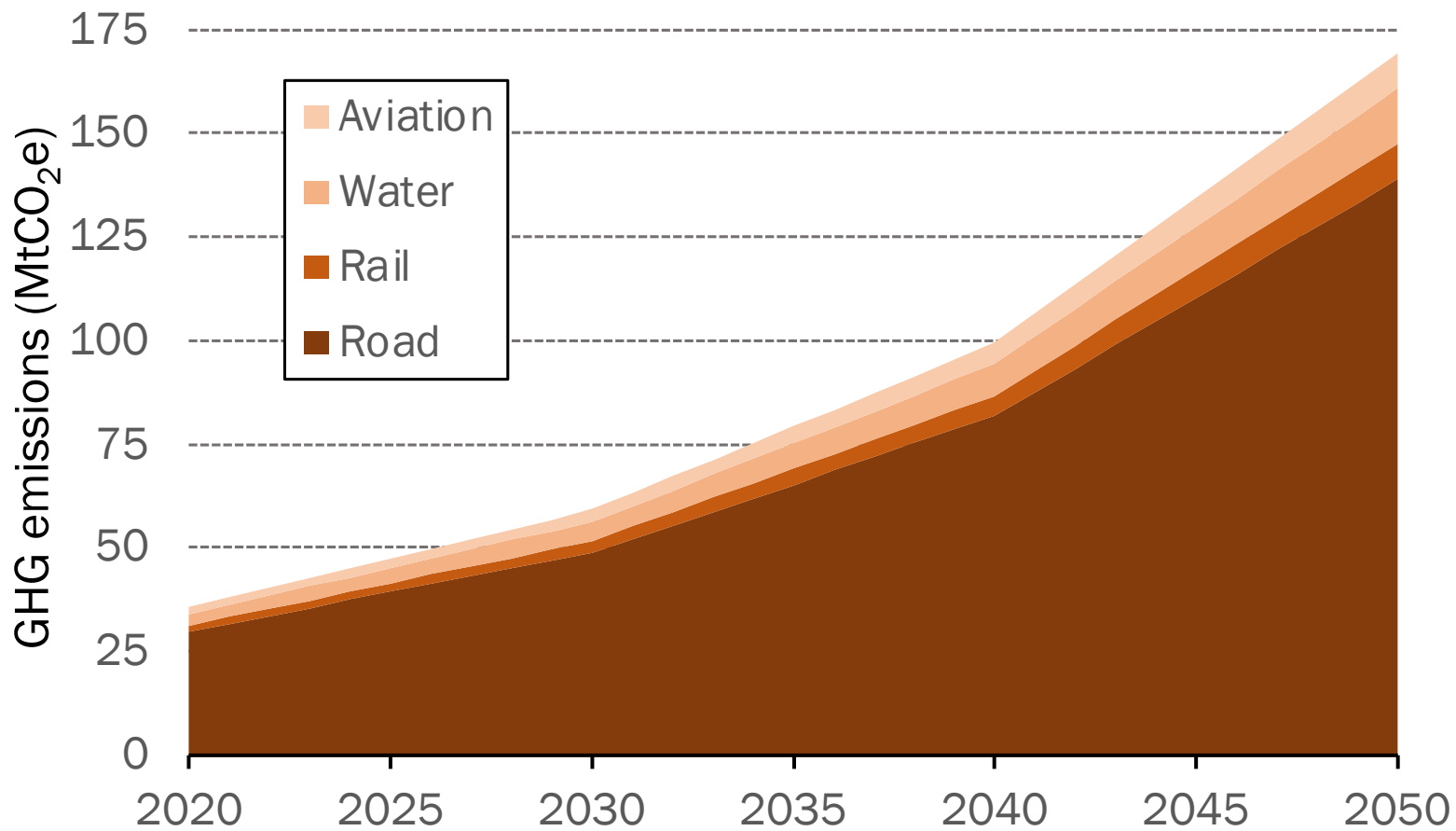
Levelized cost of electricity



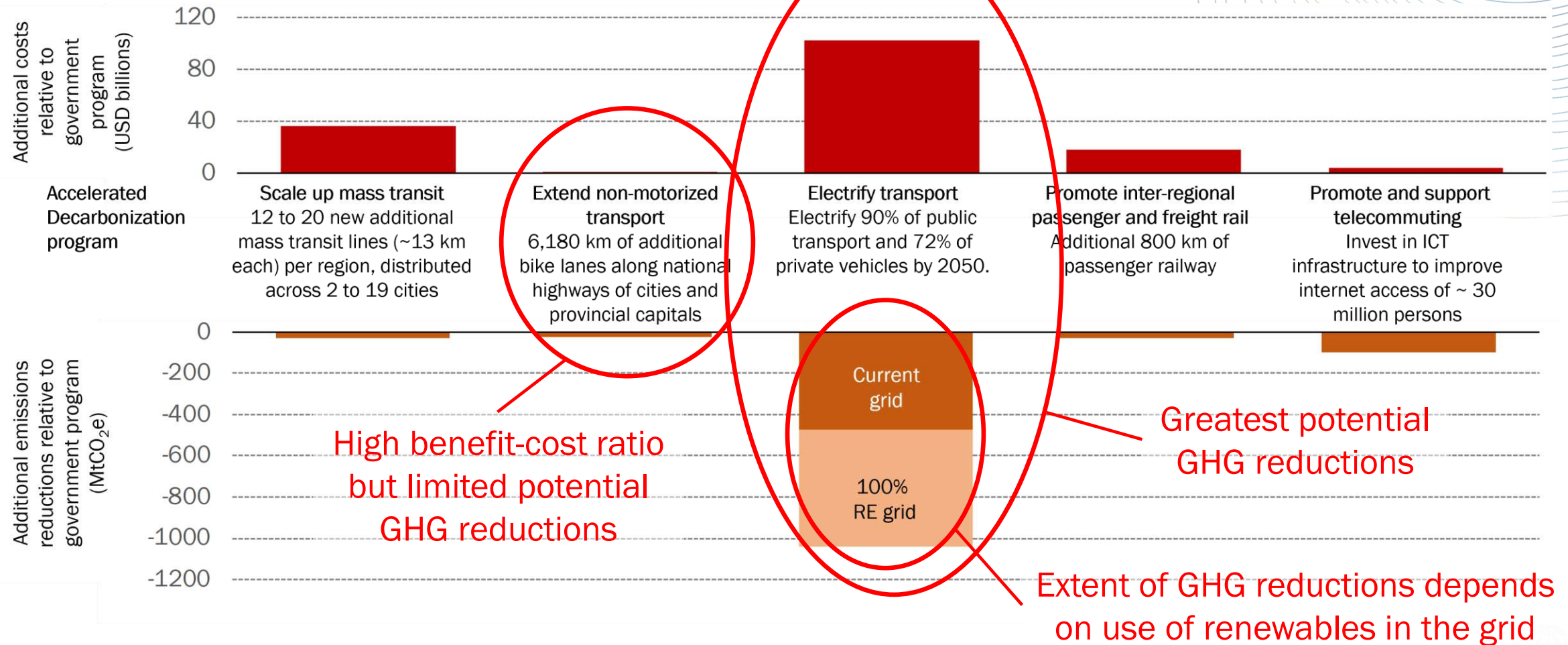
Local pollution damage costs



# Emissions and pollution from transport are increasing rapidly



# Reducing emissions from transport would generate substantial local benefits from reduced air pollution



# Urban areas are severely threatened by climate change



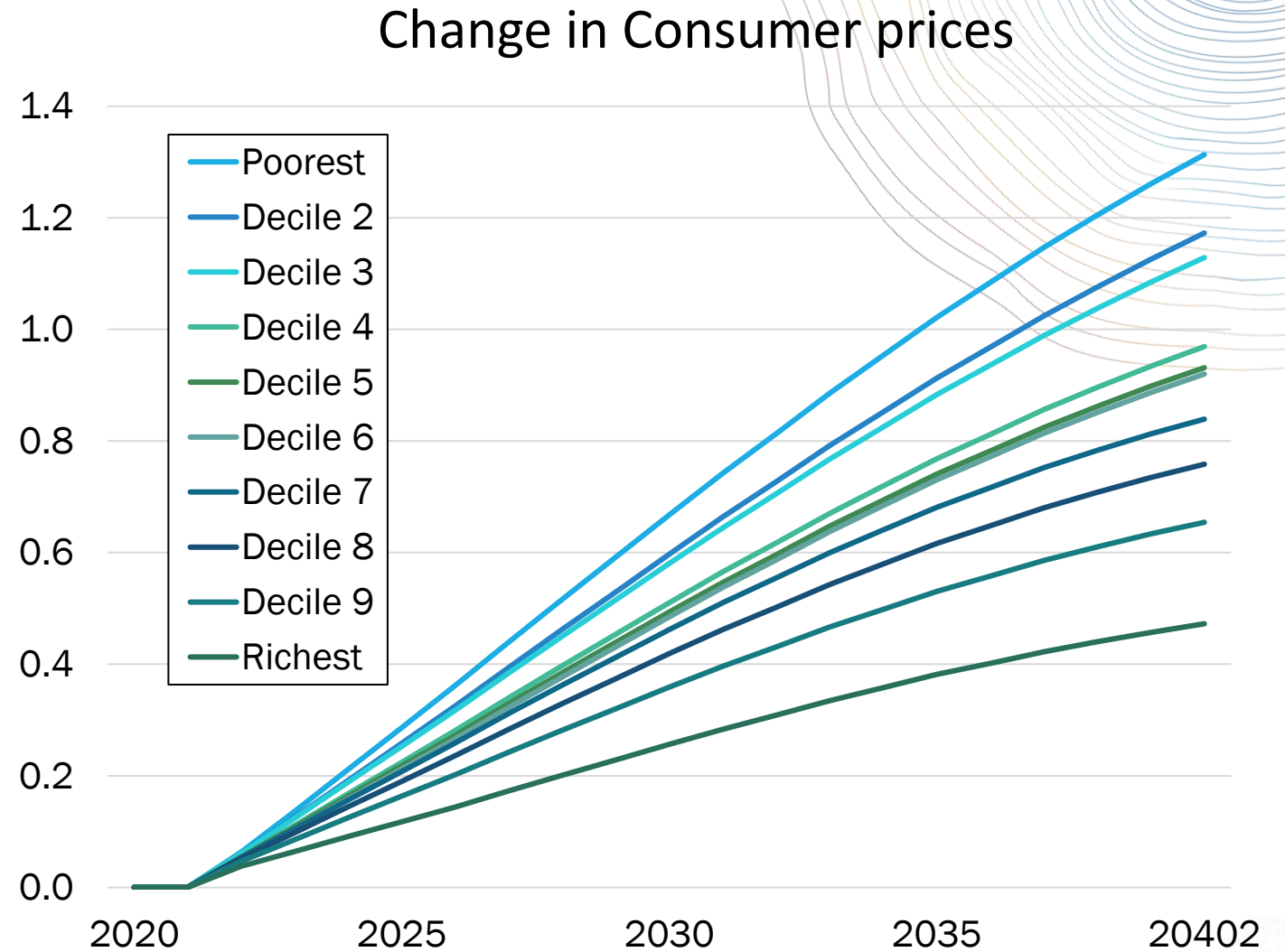
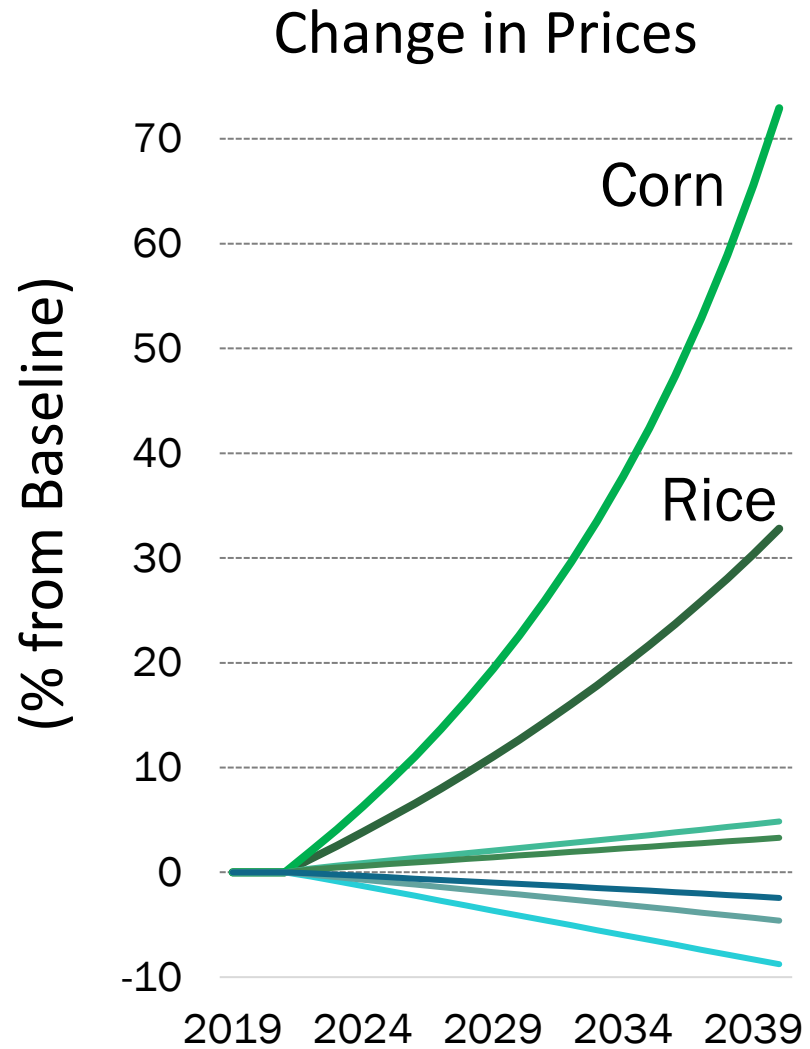
- Many areas and large share of the population is vulnerable to flooding
  - High (>1.5m)
  - Medium (0.5-1.5m)
  - Low (<0.5m)
- 65% of health care facilities are under threat
  - Hospital affected by flood
- Communication links can be cut
  - Highway affected by flood

# Economy-wide impacts of Climate Change

An economy-wide analysis is necessary as the repercussions of climate change extend far beyond individual sectors; a sector-specific approach would not capture the broader poverty and development implications

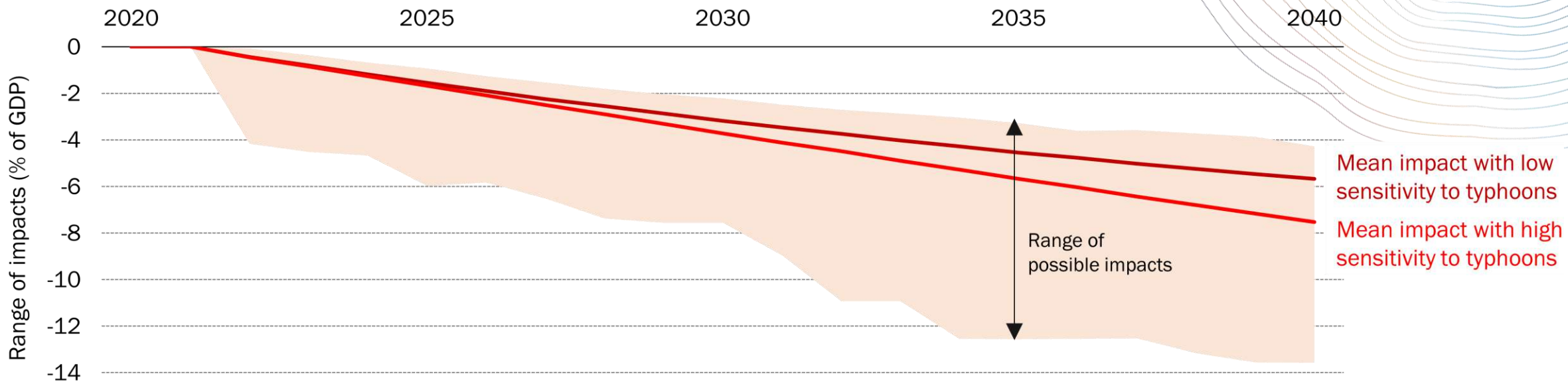
Use a range of macro-economic models

# Climate Change impacts on agriculture propagate through the economy



# Damages from Climate Change are a threat to the Philippine economy

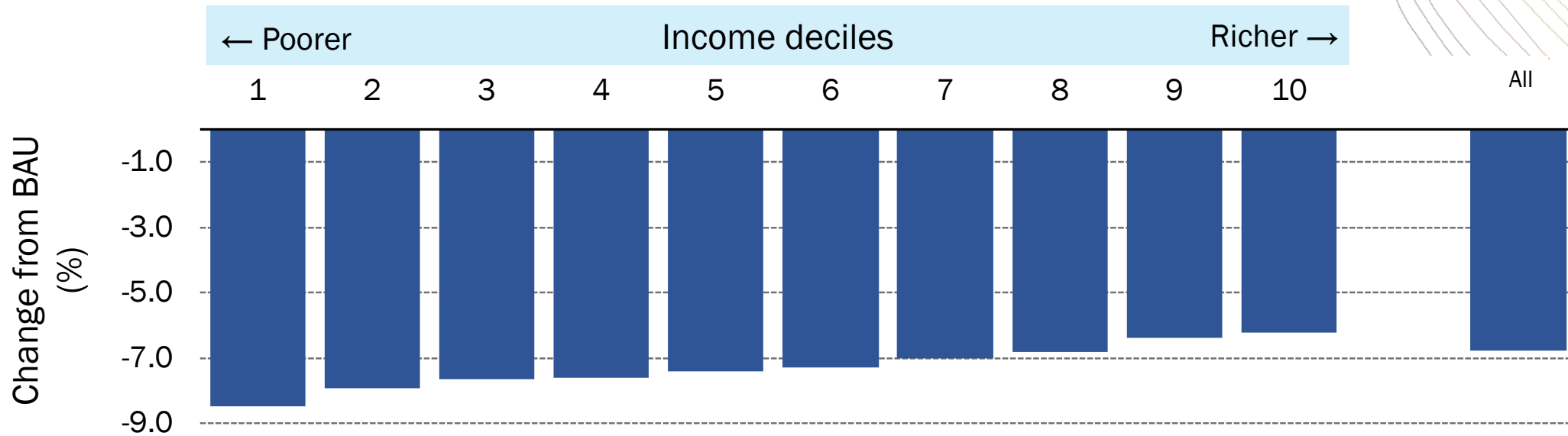
Climate change is likely to reduce GDP substantially, but the range of possible outcomes is wide



- Increasing intensity and frequency of extreme events and productivity losses could lead to economic damages that amount to 13.6 percent of the country's GDP by 2040, with the worst effects in capital-intensive industries

# Damages from Climate Change are a threat to the Poor

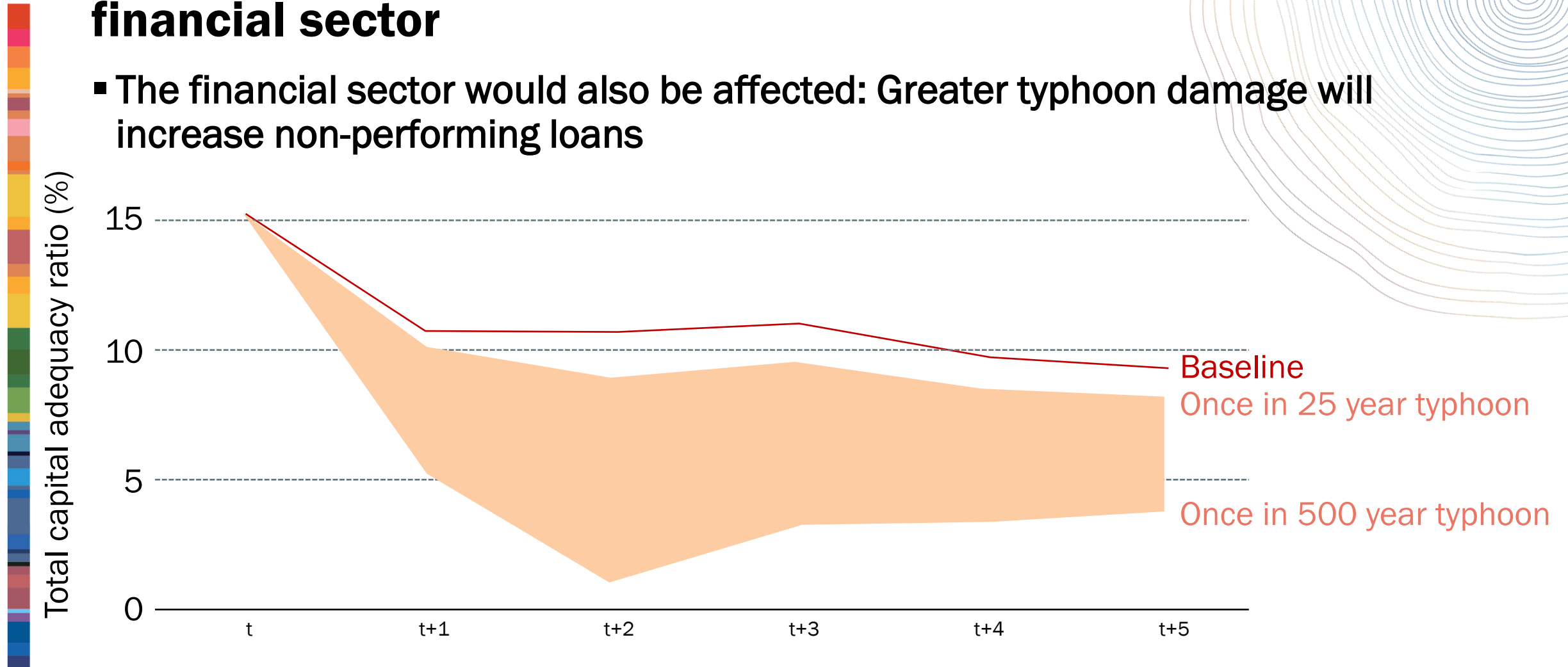
Consumption by poorer households will be most affected by climate change



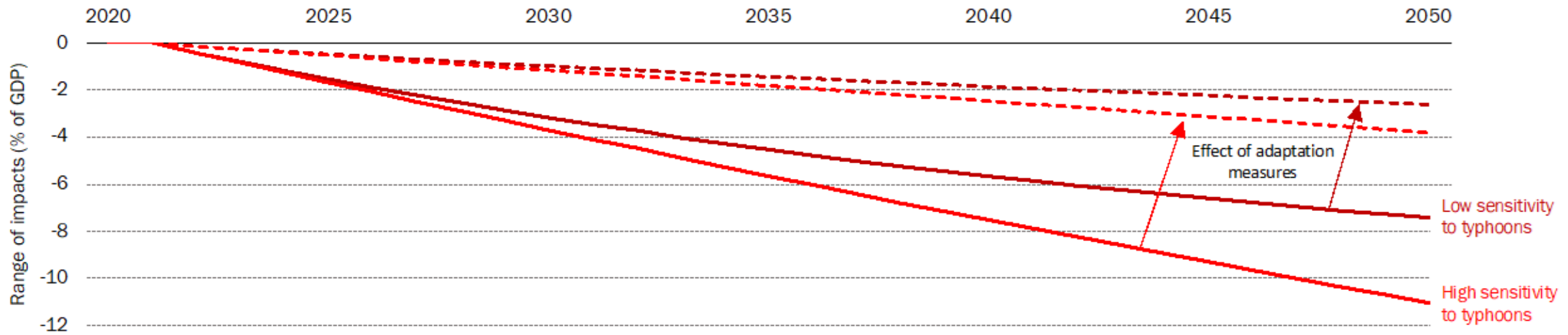


# Damages from Climate Change are a threat to the financial sector

- The financial sector would also be affected: Greater typhoon damage will increase non-performing loans

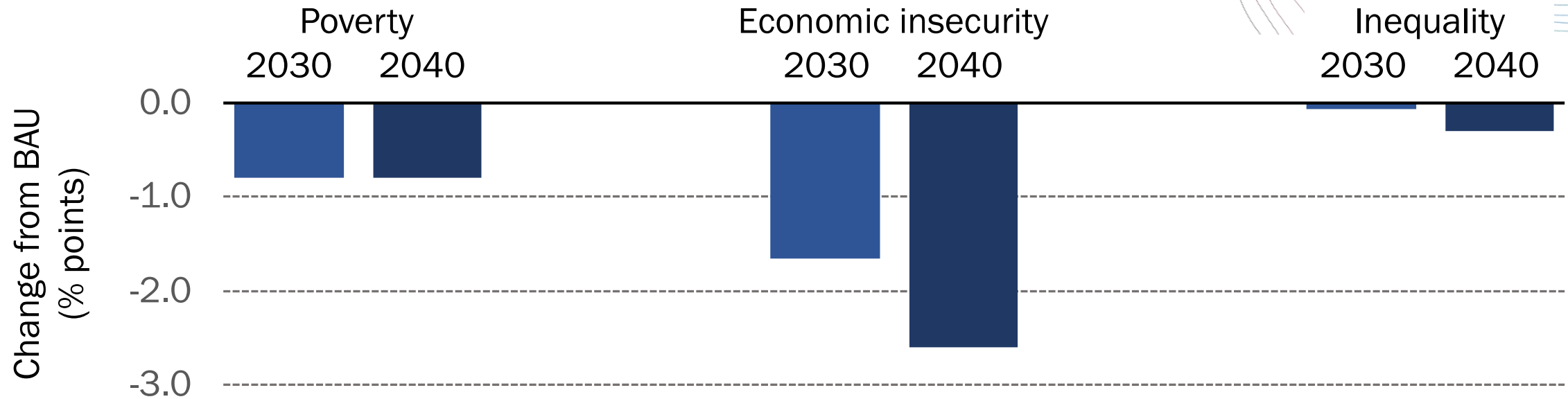


# Adaptation actions can reduce the impact of Climate Change on the economy



- Adaptation measures in agriculture, infrastructure, and human capital can reduce the economic losses from climate change by around two-thirds

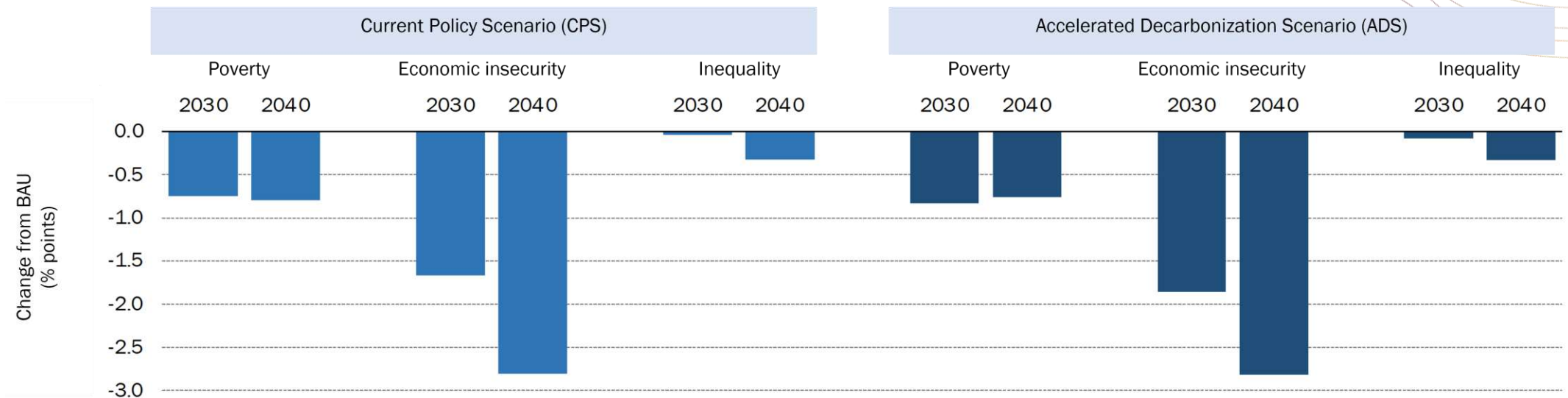
# Adaptation actions can reduce the impact of Climate Change on the poor



- Poverty and economic insecurity would decline faster with adaptation measures than under BAU, but there would be little change in inequality trends

# Mitigation actions stabilizing emission levels bring economic benefits

- Mitigation measures could be associated with a positive impact on GDP if carbon tax revenues are used for investment: GDP could increase by about 0.5 percent and generate about 80,000 jobs in 2040



Poverty and economic insecurity would fall faster with mitigation measures, but the effect on inequality would be small

# Financing climate actions

## Financing adaptation measures

- Public and private investments are needed to finance adaptation through climate-resilient infrastructure
- On the public side, strengthened budget tagging, procurement policies such as green public procurement (GPP), and layered Disaster Risk Financing strategy are being pursued by the government
- On the private side, issuing ESG bonds under the recently introduced Sustainable Finance Framework (SFF) could leverage private financing for climate actions

## Financing mitigation measures

- To be sourced mainly from private sector, incentivized by government's existing and new regulatory technology-push and demand-pull policies to accelerate adoption of green technologies
- Need to ensure incentives are in place, including concessional finance supporting mitigation measures
- Setting a moderate price on carbon of up to USD5/tCO<sub>2</sub> could signal firms and individuals to adopt low-carbon technologies while raising revenues of up to 0.4 percent of GDP per year

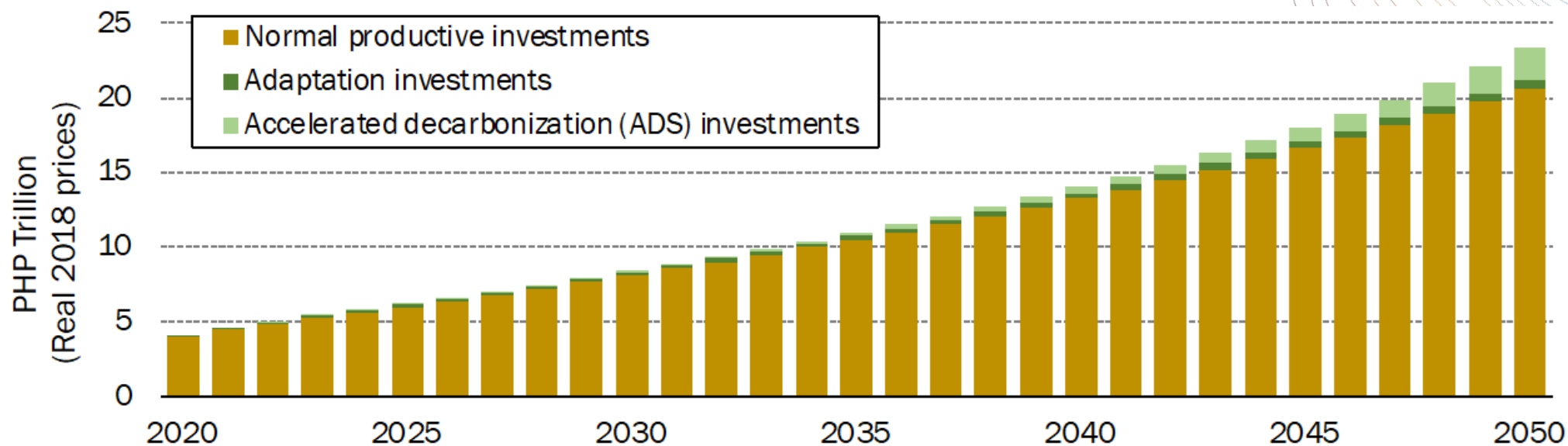
# Responding to climate change in the Philippines

- Policy inaction would impose substantial economic and human costs, especially for the poor
- The Philippines has many feasible options to respond to climate change



# Responding to climate change in the Philippines

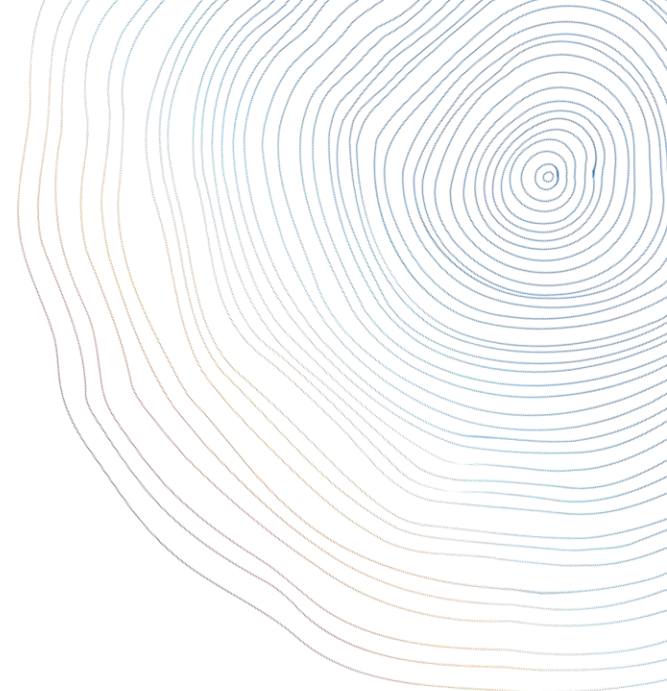
- The investments required are substantial but not out of reach: they represent a relatively small increase over normal investments



- In many cases, solutions require scaling up or fully implementing existing responses, rather than developing new ones from scratch
- Many climate investments are in the direct interest of individual actors, or can be made so by appropriate changes in regulatory and fiscal policies
- Many actions do not require investments, such as ensuring that new construction does not occur in areas at risk of floods, storm surges, or sea level rise



## Make sure the incentives are right

- **Use price signals**
    - Remove perverse incentive
    - Use environmental taxes to discourage harmful activities
    - Provide direct support to climate-smart actions
    - Provide clear information on climate change and the benefits of climate action
  - **Remove obstacles to private sector climate action**
    - Ensure financing is available
    - Remove regulatory obstacles
    - Attract climate actions by foreign investors
    - Ensure trained workers are available
    - Strengthen the financial sector's ability to contribute to climate action
- 



# Improve the effectiveness of government actions

- Improve coordination of climate actions at all levels of government
- Enhance the capabilities of LGUs to design and implement climate actions
- Focus on effective implementation of existing plans and regulations



# Help people cope with the effects of climate change and climate actions

- Scale up existing adaptive social protection (ASP) programs
  - Mitigate the impact of the costs of climate change on people
  - Offset the potential adverse effects of climate actions
- Provide training for green jobs
- Improve the resilience of the education system
- Implement climate-sensitive health policies



# Main Messages

- Take action to avoid worsening the problem
- Make sure the incentives are right
- Address both extreme and slow-onset events
- Responses to climate change need to vary across the country
- Target climate actions taking poverty and vulnerability into consideration
- Use adaptive social protection (ASP) to help people cope



