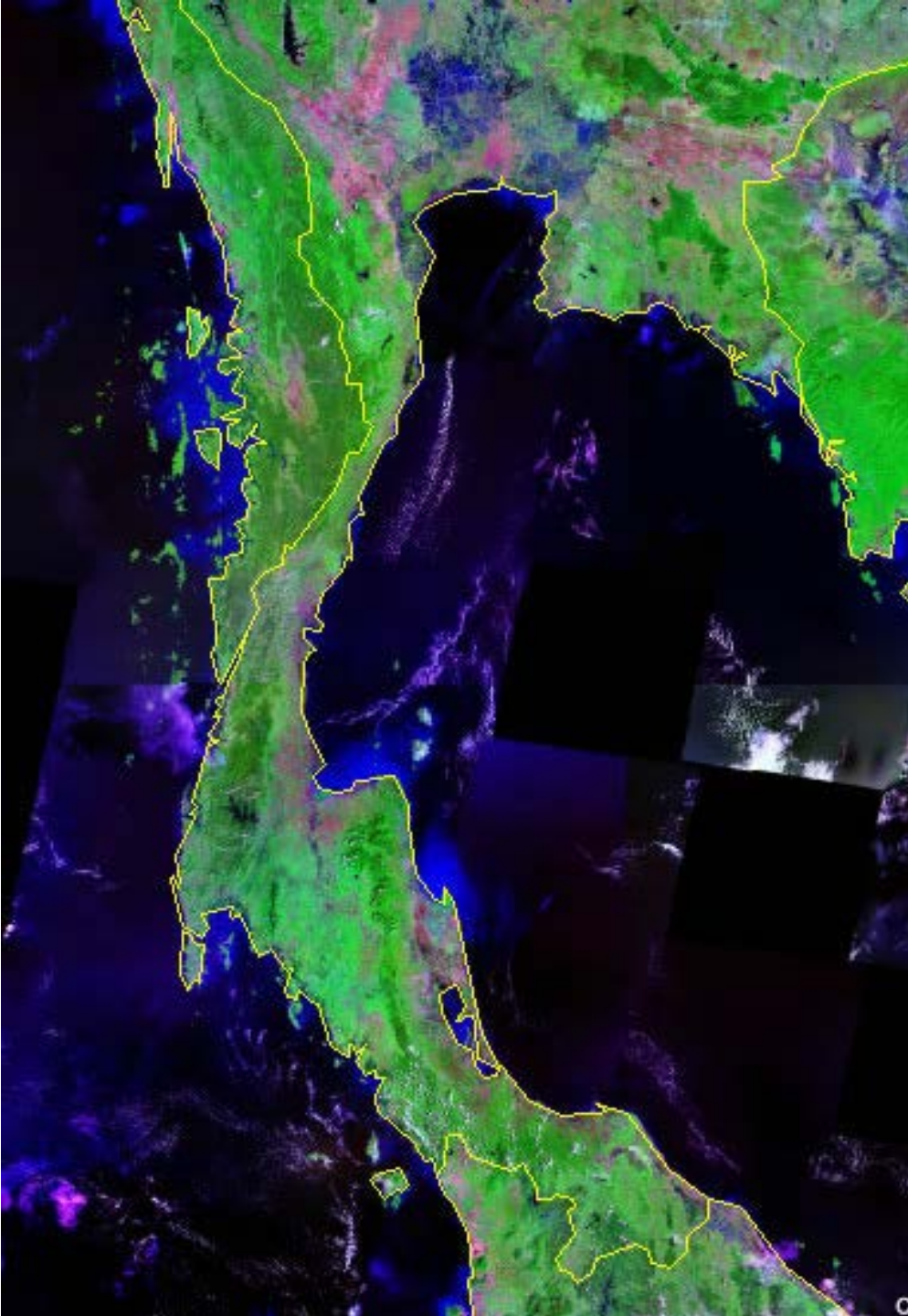


***Thailand's Coastal Planning/Preparation
for
Climate Change Adaptation***

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How do we use them?

Settlements

Aquacultures

Industrial zones

Tourisms

What are their nature?

Sandy or muddy

Steep or shallow

Climatic shocks & Development Stress

- Climatic and marine conditions
 - transformation of familiar seasonal conditions
 - increasingly unpredictable flood
 - increasing of red tide phenomena
 - increasing of erosion
 - Fragmentation and loss of habitat
- Rapid and unplanned growth
 - increasing of population (birth and migrate)
 - inadequate infrastructure
 - diminishing natural resources



CC is here or is coming?



More wet, less dry
More extreme, less moderated



Changes from climate changes

What-If scenarios

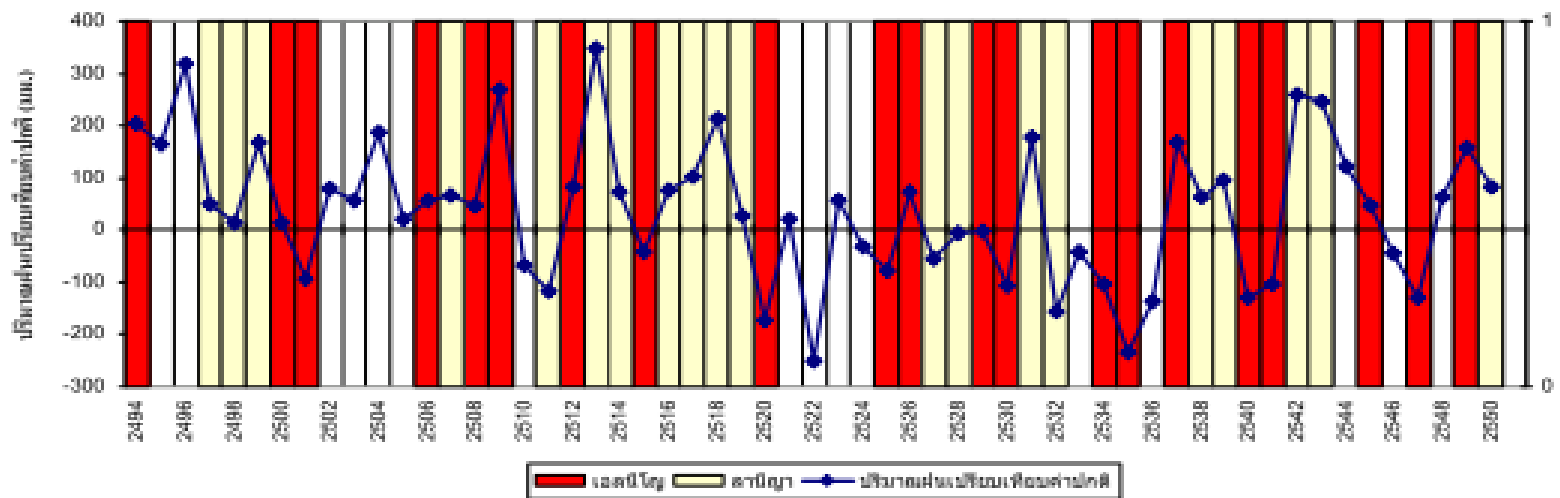
Coastal and marine environment domain

- Shorelines (shapes, profiles, and stabilities)
- Riverine-estuarine-marine interactions (ebb, flood, salinity, and oxygen)
- Oceanography (tide, current, and waves)
- Seasonal phenomena (patterns, period, and intensity)
- Marine and coastal ecology (locality, boundaries and functions)
- Diversity of the nature (biology and ecology)
- Distribution mechanisms (nutrients, food web, and pollutants)

Socioeconomic domain

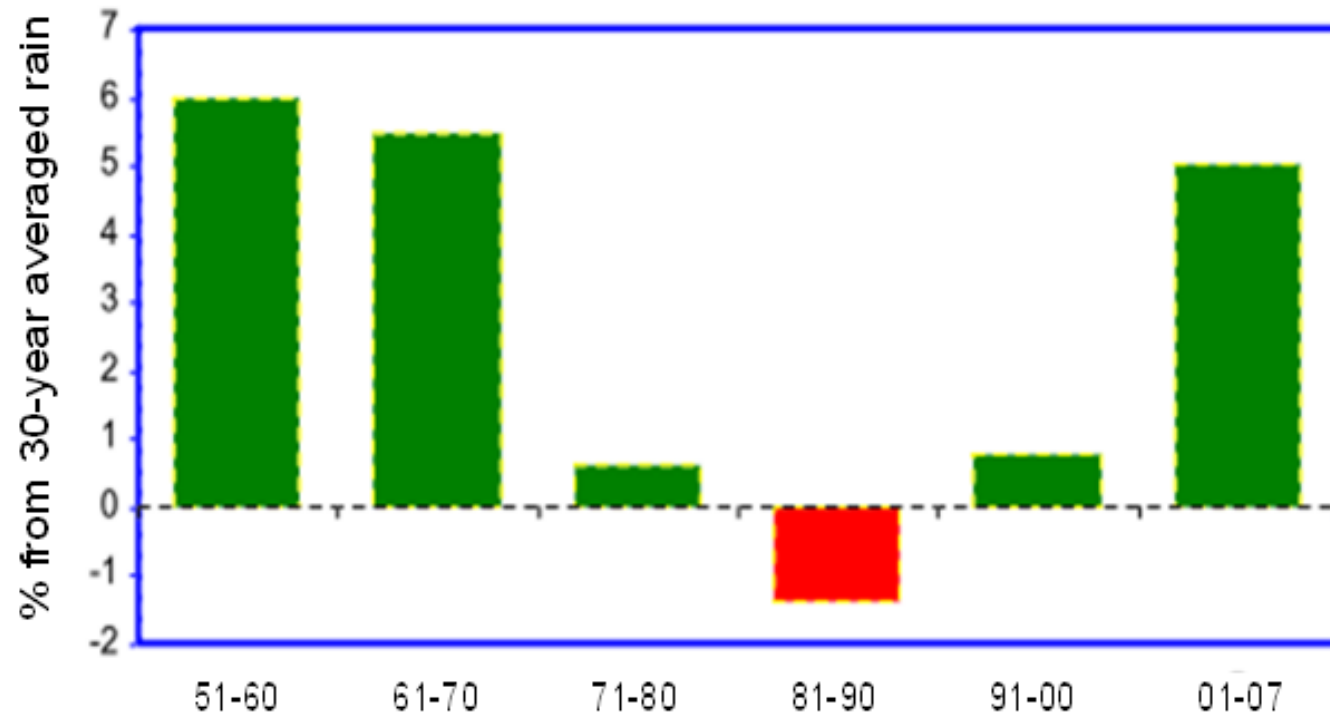
- Fisheries and aquaculture -- resources providers
- Tourism
- Settlement

ปริมาณฝนสูงกว่าค่าปกติในปีที่เกิดปรากฏการณ์เอลนีโญและลานีญา



วนิดา สุขสุวรรณ. สภาวะโลกร้อนกับการผันแปรภูมิอากาศในประเทศไทย. กรมอุตุนิยมวิทยา

http://www.tmd.go.th/info/globalwarming_climatechange.pdf



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Foresee the Future

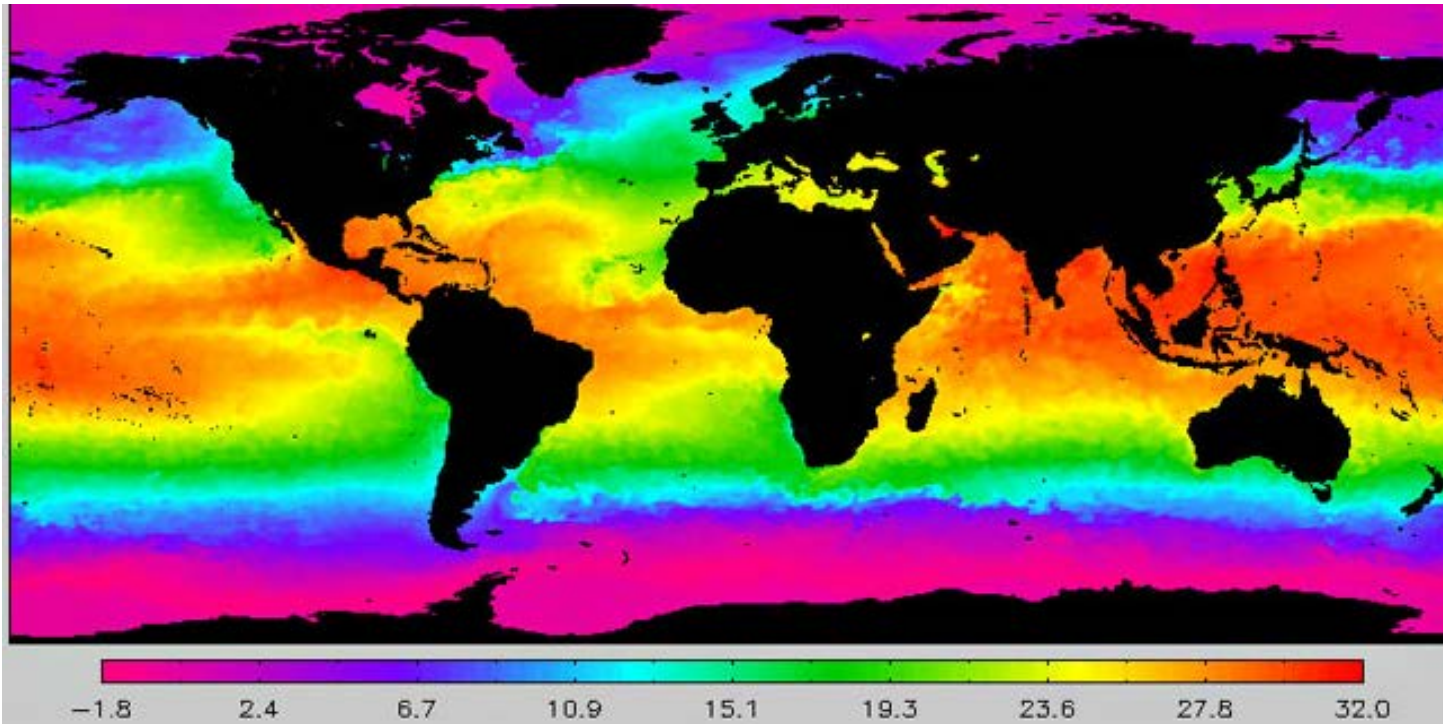
Prediction from the projection

Most likely scenarios of mitigation and collaboration

Most likely concentration of the GHGs

Most likely trends of climate change (global → regional → local)

Pacific ocean and Indian ocean (ENSO and IOD)



Adaptive measures for climate changes

The 5 broad categories of adaptation measures:

1. Prevent the loss -- adopt measures to reduce vulnerability to climate change.
2. Tolerate the loss -- do nothing to reduce vulnerability and absorb the losses.
3. Spread or share the loss -- do not reduce vulnerability, but rather spread the burden of losses across different systems or populations.
4. Change the activity -- stop activities that are not sustainable under changed climate, and substitute with other activities.
5. Change the location -- move the activity or system

Appropriacy, precautionary, and limitation

Some Considerations

- Space and time
 - Space management and plan ahead
- Living shoreline *vs* hard structures
 - Functional ecosystems
 - Cement or bamboos
- Complement *vs* substitutes
 - Measures that are complementary to each others
- Budget constraints
 - No-cost (or low-cost) and phased approach



Institutional measures

- Mainstream into coastal policy
 - Select entry points and the champion counterparts
 - Plans at national, sub-national, and local scales
- Two-track approach
 - Community awareness and contribution
 - Combining local level community-based adaptation with national level

