

# Climate Change in Thailand

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Climate change is not a new issue nowadays. As it is affecting both living and non-living things around the world today. It refers to increases in the average levels of global climate change over time. As the averages in the state of climate change over time increases, the average temperature of the atmosphere increases, glaciers melt and sea levels rise. Deserts are on the increase and droughts are becoming more common in some areas.

Thailand, like other developing countries, needs more energy supplies to stimulate the levels of change in its economic growth. As such, it could be the source of global climate changes. Thus, it is time to observe our country, regarding its affect on global climate changes elsewhere.

## I. The Causes of Climate Change

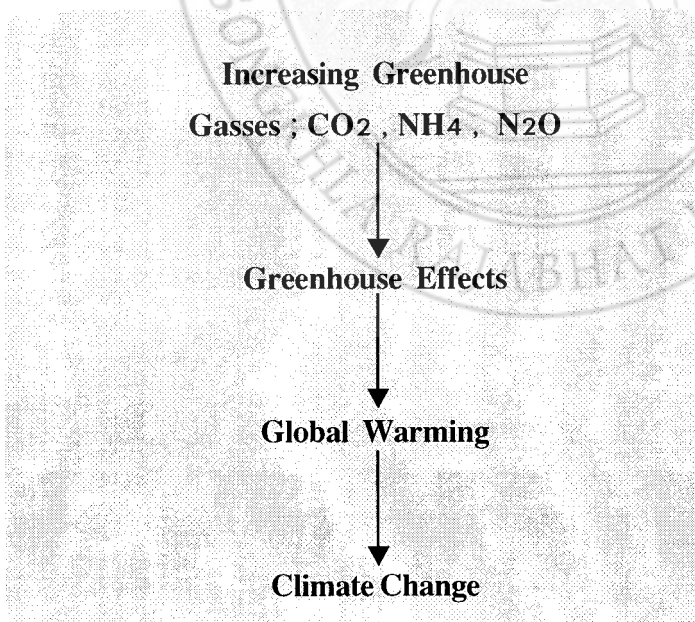


Diagram 1 The causes of climate change

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According to diagram 1, increasing greenhouse gases in the atmosphere plays a crucial role to changes in global climate. These changes could include temperature rise, changes in seasonality, changes in precipitation patterns and accelerated sea level rise. Hence, the main emphasis will be on identifying the origins of greenhouse gases. The following table outlines where greenhouse gases come from.

**Table 1 The origins of greenhouse gases**

Greenhouse gases	Natural Origins	Man-made Origins
1. Carbon Dioxide (CO <sub>2</sub> )	Occurs naturally in the atmosphere, and through respiration (breathing) of plants and animals	Combustion of fossil fuels : <ul style="list-style-type: none"> <li>● Exhaust from motor vehicles</li> <li>● Burning</li> <li>● Industrial activities (power plants)</li> </ul>
2. Methane (CH <sub>4</sub> )	<ul style="list-style-type: none"> <li>● Decomposition of organic matter</li> <li>● Marshes</li> </ul>	Agricultural activities (livestock , rice paddies)
3. Nitrous Oxide (N <sub>2</sub> O)	Naturally emitted from soils and oceans	<ul style="list-style-type: none"> <li>● Agricultural activities (Soil cultivation , use of nitrogen fertilizers)</li> <li>● Exhaust from motor vehicles</li> </ul>

Source : <http://www.pscleanair.org/programs/climate/whatis.aspx>

For Thailand, the major sources of greenhouse gases arise from the expansion of nonagricultural sectors, particularly the industrial and service sectors. In supporting the expansion, the transportation sector is considered as a dominant factor of carbon dioxide (CO<sub>2</sub>) emissions. While the power sector holds the second largest share because of the high levels of lignite used in generating electricity. Another main source is the growing of rice. Rice fields in Thailand release methane (CH<sub>4</sub>) which is also an important source of greenhouse gases.

## II. The Impacts of Climate Change in Thailand

Here are some remarkable impacts of climate change in Thailand :

### 1. Forests Resources

The forests in Thailand will be destroyed due to carbon dioxide concentration of the atmosphere (Boonprakob and Santisirisomboon, 1996). This change could cause prolonged droughts and therefore affect water resources. As such , it will have a serious impact on agricultural sector which depends largely on natural water resources.

### 2. Biodiversity

The Indo-Burma region , including Thailand , is identified as a biological hot spot, as it is rich in biodiversity (Myers et al, 2000). Most plants in the region have been utilized for pharmaceutical uses. Unfortunately, plant communities are highly sensitive to changes in climate conditions. Greenhouse gas, specifically CO<sub>2</sub>, impacts their growth and development. This could tremendously affect the existence of these plants.

### 3. Coastal Resources

Climate change can cause mean world temperature levels to rise. Water temperature levels are undoubtedly increased as well. In Thailand , warm water temperatures in April 1998 caused widespread coral bleaching in the Gulf of Thailand from Narathiwat province and Trat province, up to Chonburi province. There was no bleaching on the other side, in the Andaman Sea area. (Boonprakob and Santisirisomboon , 1996)

## III. Conclusion

Thailand, as with other nations, is also vulnerable to the effects of climate change. The country , unfortunately , is less able than the industrialized countries to mobilize the technical and financial resources needed to respond to these changes . Moreover , in the present time , it is not clear , at least to the public, how Thailand should response to climate change. Thus, the country should adopt protective policies and strategies aimed at as reducing these climate changes without disturbing economic growth. Besides this , Thailand should cooperate with other countries to slow down climate change since no one can solve this problem on their own.

### References

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