



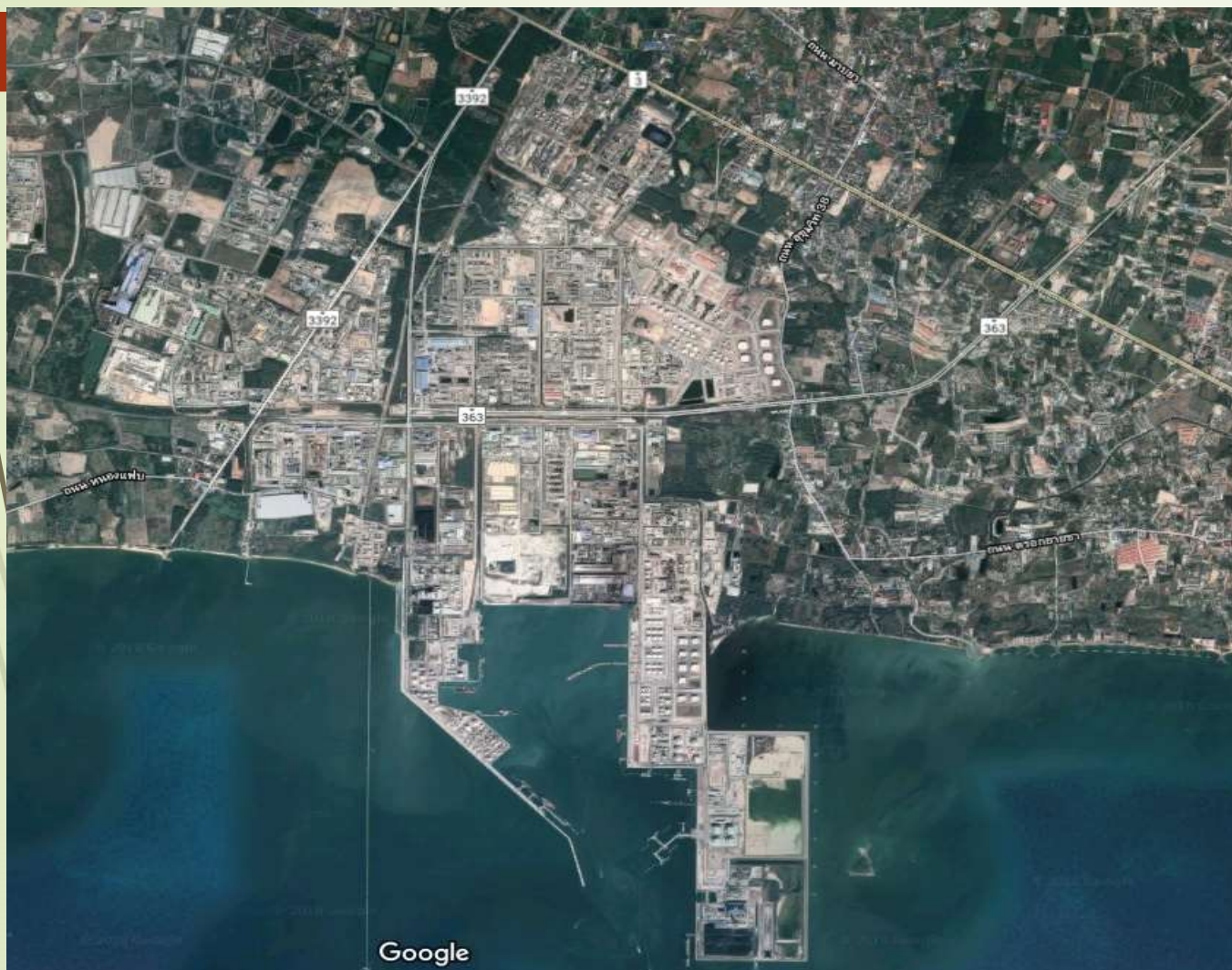
Application of Air Quality Model for Area-Based Management: A Case Study of Carrying Capacity for VOCs in Map Ta Phut, Thailand

Pollution Control Department, Thailand

About Pollution Control Department, Thailand

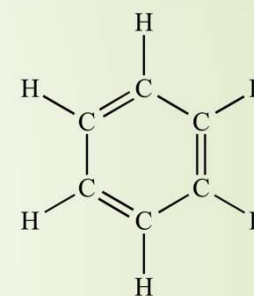
- ▶ **Pollution Control Department** was established on April 4, 1992 under the Royal Decree on the Organizational Division of Pollution Control Department, Ministry of Science, Technology and Environment B.E. 2535 (1992), as result of the Enhancement and Conservation of the National Environmental Quality Act B.E. 2535 (1992). In the B.E. 2545 (2002) until present, Pollution Control Department has been transferred to the Ministry of Natural Resource and Environment, as a result of the Act on Organization of Ministries, Sub-Ministries and Departments, B.E. 2545 (2002).
- ▶ **Vision:** Pollution Control Department Protect environment, control and solve pollution problem to make environmental quality within the standard by 2026.
- ▶ **Mission**
- ▶
 1. To develop an appropriate standards, tools and mechanism for pollution management in relation to economic, social and technological phenomenon.
 2. To enhance staff's capacity, information technology and innovation on pollution management.
 3. To communicate, expand cooperation and strengthen stakeholder's participation on pollution management.
 4. To control, supervise and develop environmental laws regarding to pollution management.
 5. To coordinate cooperation on pollution management with related organizations both national and international levels.

Research Background

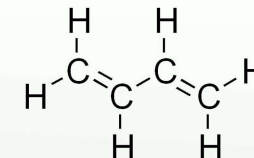


Critical Parameters

BENZENE



1,3-Butadiene

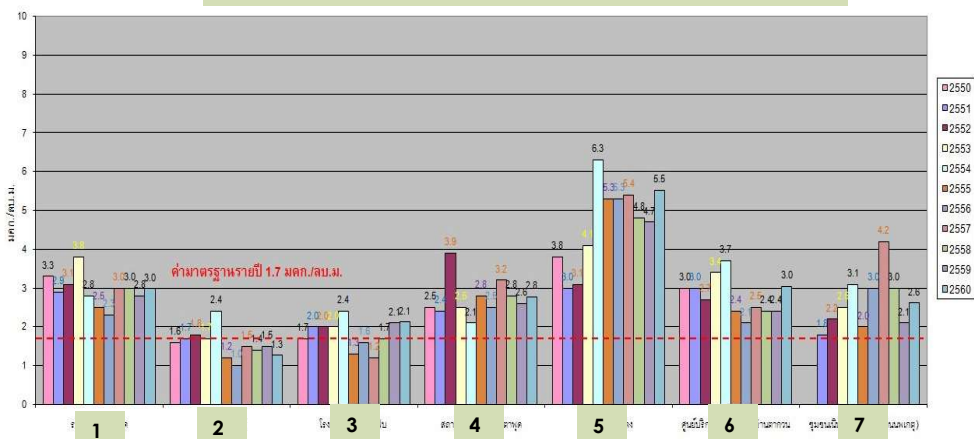


Research Background

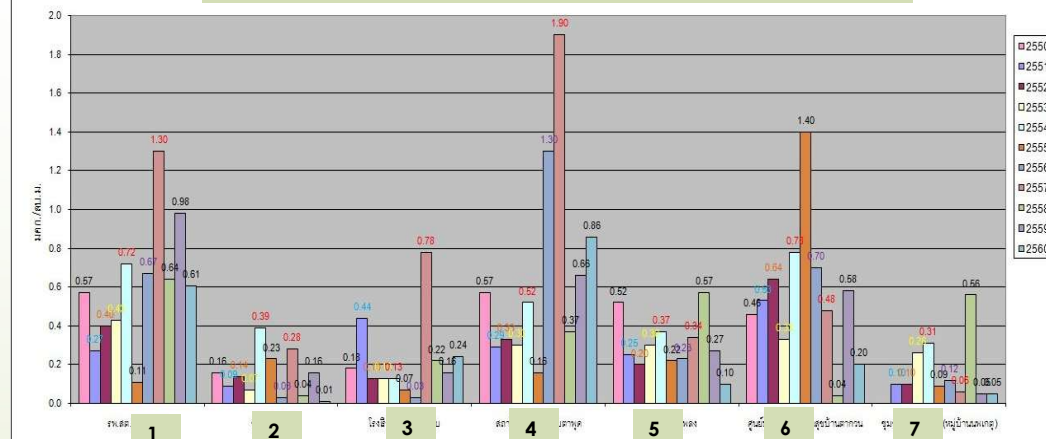
* Source: Pollution Control Department, Thailand

Parameters	Concentration (ug/m3)
Benzene	1.7
1,3-Butadiene	0.33

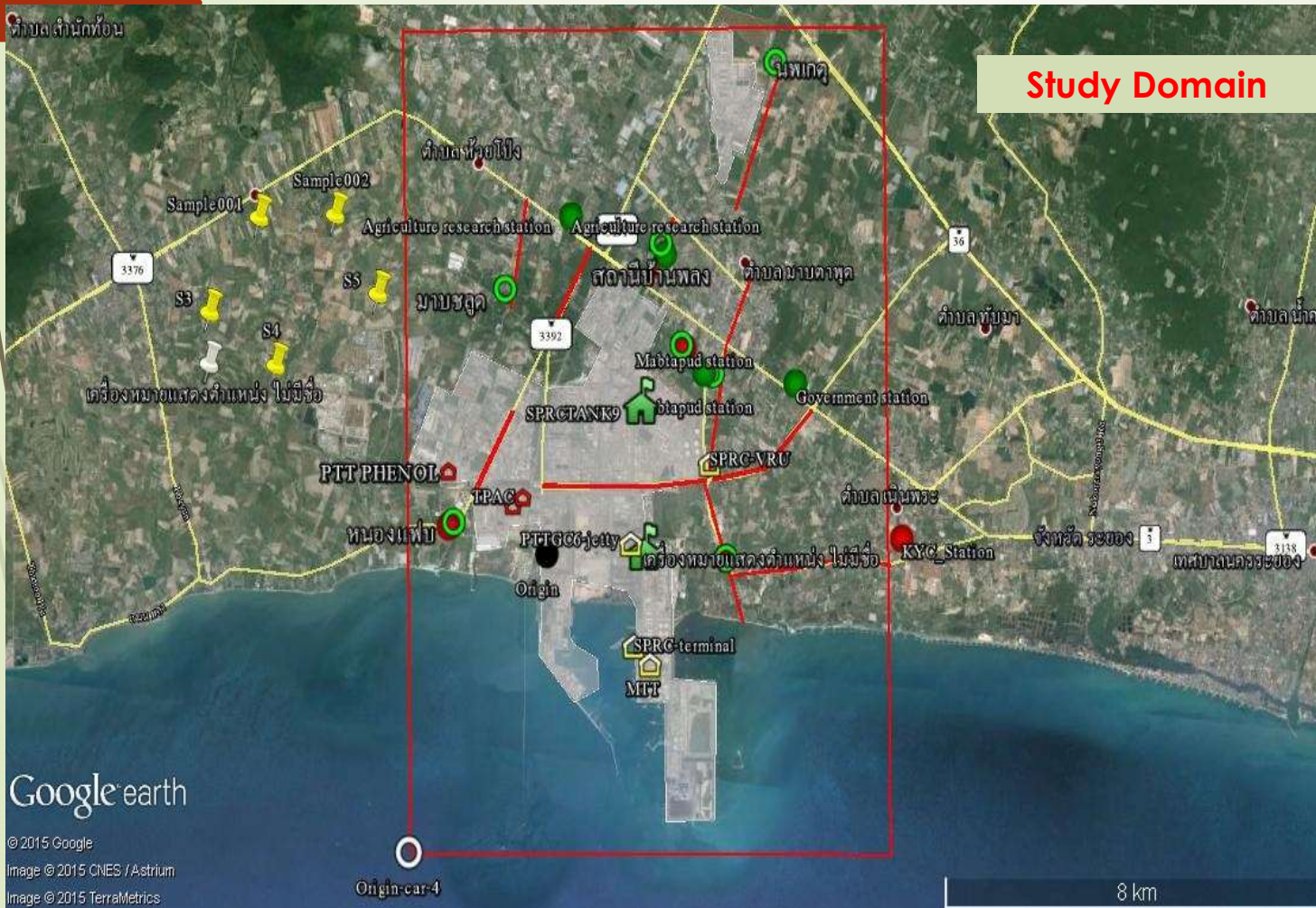
Benzene Annual Average last 10 years



1,3-Butadiene Annual Average last 10 years



Research Methodology

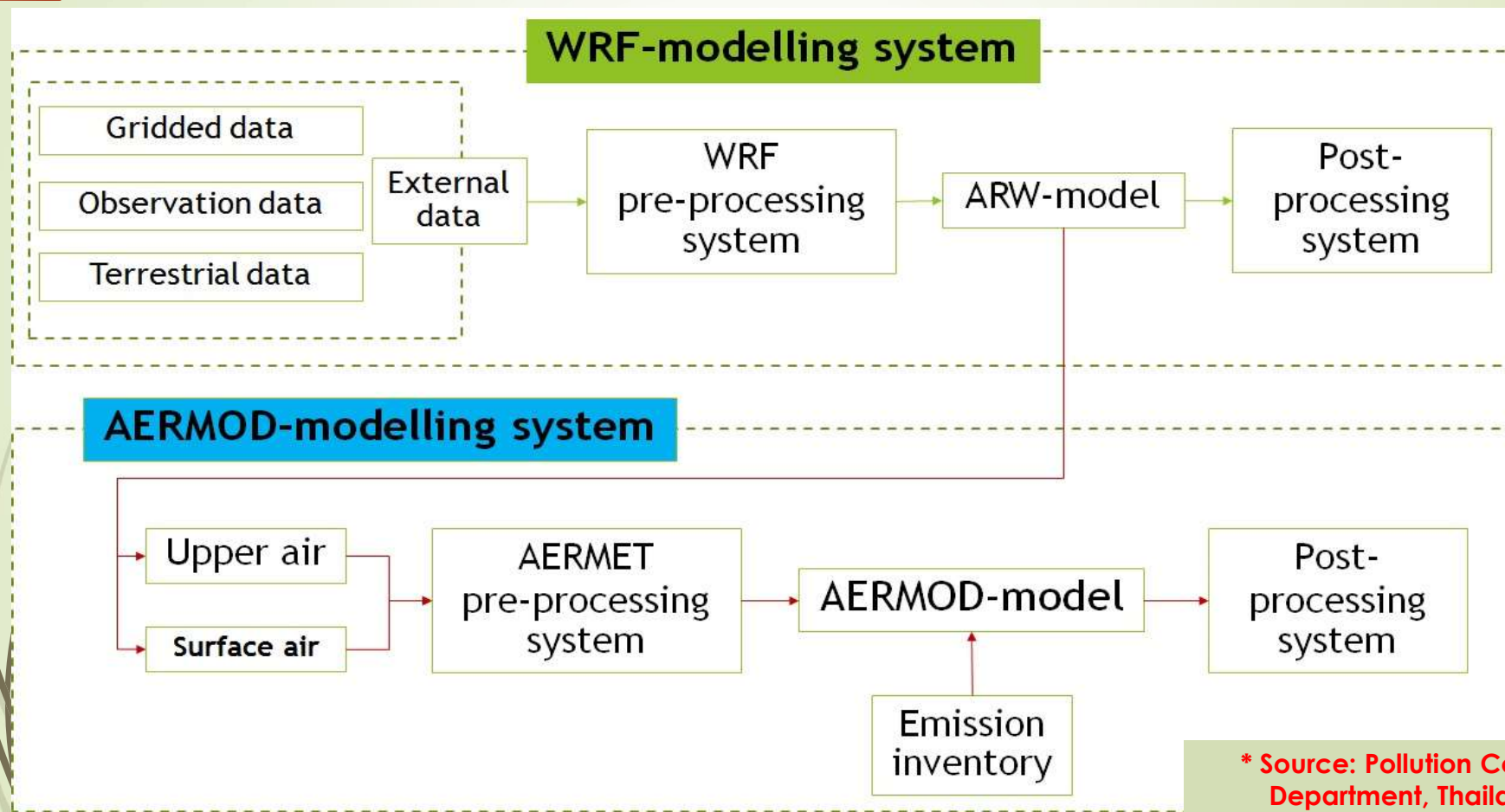


Challenge:
New Standard
New Control
Strategy

Possible Solution:
Carrying Capacity

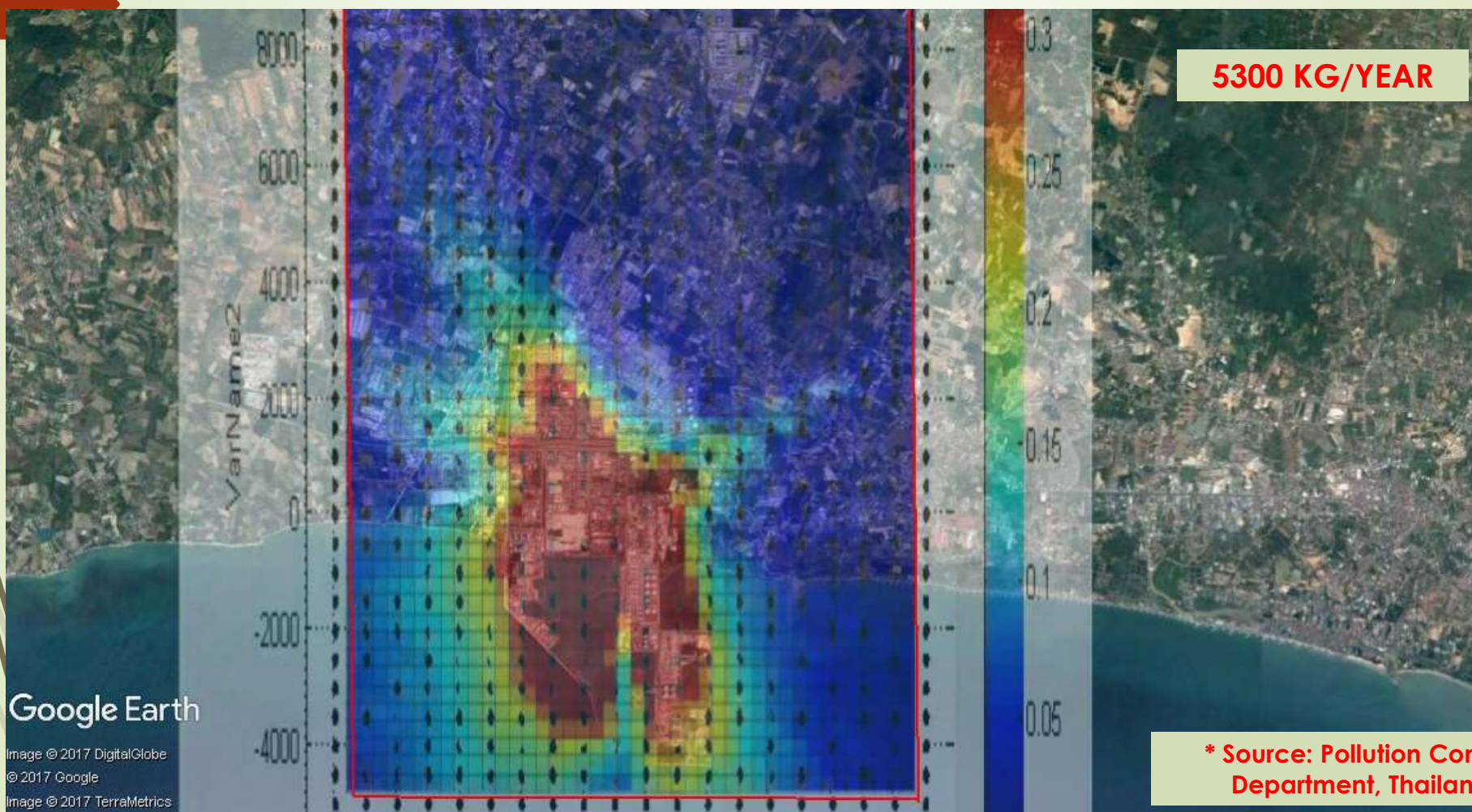
Research Methodology

Weather research forecast model (WRF) and AERMOD



* Source: Pollution Control Department, Thailand

Carrying Capacity of 1,3-Butadiene in Map Ta Phut, Rayong



Conclusions

- Possible method for VOCs mitigation in Map Ta Phut, Rayong, Thailand is presented.
- Carrying capacity of benzene and 1,3-butadiene are presented

Future Works for Area-Based Management

- New Standard and New Control Strategies
- Loading Limit for Environmental Impact assessment