



ASIA PACIFIC CLEAN AIR PARTNERSHIP
**Case studies from
Japan**

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ISSUE: Control of VOC emissions in Japan

Challenge in early 2000s:

- Low achievement rate of photochemical oxidant reduction
- Demand to reduce PM concentration

Aim : Reduce VOC as a precursor of photochemical oxidant and PM.

Measures:

- **Political target of VOC reduction** was set in 2006 (30% decrease in 2010 compared to 2000),
- **Combination of regulatory control** on major emitters
- **Voluntary efforts** by small companies that are minor but wide-spread emitters of VOC.

Processes : In order to consider counter measures,

- A number of official meetings were held from 2003 with government officers, experts and representative of private sectors.
- At the early stage of discussion, evidence of the action was carefully examined by looking at monitoring data.
- Then a VOC emission inventory was developed in order to identify major emitters.
- The policy outcome was estimated by simulation model.
- Integrated these information, the **political target**, 30% decrease of VOC in 2010 compared to 2000, was set.
- Based on the emission inventory, **target sector of regulatory control were determined**, such as drying facilities for chemical manufacturing, spray coating, and this was expected to provide a 20% contribution of total reduction.
- A 10% reduction was expected to be achieved by **voluntary efforts** by small private companies.

Success:

- Volatile Organic Compounds - a significant decrease of VOC by 42% in 2009 compared to 2000. **A higher achievement than the original target!!**
- **PM - the achievement rate of the Environmental Quality Standard has been near 100%.** On the other hand, the reduction of photochemical oxidant concentrations is still very low, around 1%, so further action is needed.

Shared Experience:

1. The keys to establishing political target: INFORMATION of ambient monitoring, emission inventory and model simulation is very important not only for VOC reduction but also general environmental policy.
2. The combination of regulation and voluntary effort has been successful in Japan. It is important to carefully consult with private sector at early stage.
3. Technological know-how has been accumulated in various sectors in monitoring and control VOC

Replication ??

Technological know-how has been accumulated in wide range of sectors which would be useful in taking action in other countries.