



# PRESS Ministry of Natural Resources and Environment

## Pollution Control Department

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Volume 89/2017, 28 December 2017 (B.E. 2560)

### Thailand State of Pollution 2017

Pollution Control Department has concluded Thailand's state of pollution 2017 that the major water quality situation was determined to be at fair level. Coastal water quality was fair to good level. The overall air quality showed improvement. The pollutants also has a problem are among of particulate, Ozone and VOCs. The situation of waste and hazardous waste management increased for 340,000 tons from last year, in case of a population growth and an expansion of urban.

On 12 January 2018, Mrs. Sunee Piyapanpong, Director General of Pollution Control department makes a statement on Thailand state of pollution 2017. She said that the water quality of 59 major rivers was a good trend during those year. The situation of water quality was determined to be at fair to good level increased from 80% to 86% while water quality at poor level was decreased from 20% to 14% as well as water quality at very poor level was not found. The regions compare of water quality represent the best of water resource at good quality in south region, the second in northeast region and central region also had poor quality same at last year.

The top 5 of water resource at good quality were Upper Tapi, Upper Lam Takong, Lum Chee, Songkram and Sai Buree, while Lower Chao Phaya, Lower Tha Chin, Upper Phang Rad, Lower Rayong and Kuang had a top 5 of poor quality in case of a river flow passed a density of population lived, industrial location, agriculture area and animal farm. In addition, they don't have a waste water treatment and less performance for management.

In 2017, the most important case has an effect to water quality of local house and agriculture area were from break of wastewater plant of Thai ago energy public company limited, Supanburi, on 1 October 2017, due to a period of torrent event if wastewater diluted to local house and Tha Chin river. PCD monitored water quality at a point of case was determined at lower standard so made an effect at very poor quality in Kagi brook, Kha Seal brook and Tha Chin river. Supanburi has a commanded to entrepreneur that stop processes, improve wastewater treatment plant during 45 day and treat population who has an effect at health center also paid all of compensation from damage.

The overall coastal water quality was a good trend. The situation of coastal water quality was determined to be fair to good level increase from 91% to 96% while at poor level decrease 9% to 4% during this year. The area of good quality were Andaman coastal, East and West gulf of Thailand except Upper gulf had poor quality. The reasons to make a good coastal water quality were a good activities management, protection and decrease pollution resources on the coastal.

The top 5 of good coastal water quality are Sapri Bay and Tong Vou Len (Chumphon Province), Tup Island and Ton Shai in PP Island (Phuket Province) while top 5 of poor coastal water quality are estuary of Cho Phaya river, 12 December canal and in front of dyeing plant at kilometer no.35 (Samudprakan Province), estuary of ThaKoeay canal (Suratthani Province), estuary of Tha Chin (Samudsakron Province) because those are area to dilute waste water from households, industries, agriculture and aquaculture.

Overall, the state of air quality from PCD monitor 63 stations at 33 provinces were continuous surveillance area included big cities, industrial location and open burn in risk area. The situation of air quality showed improvement. The pollutants also has a problem are among of particulate (TSP, PM10, PM2.5), ozone and VOCs. The particulate meter diameter sized less than 10 micron (PM10) was found in third period at 268 microgram per cubic meter ( $\mu\text{g}/\text{m}^3$ ), high average at 114  $\mu\text{g}/\text{m}^3$ , standard at 120  $\mu\text{g}/\text{m}^3$ , over average in 20 provinces through down trend from last year. The particulate meter diameter sized less than 2.5 micron (PM2.5) was found in second period at 116  $\mu\text{g}/\text{m}^3$ , nationwide average at 21  $\mu\text{g}/\text{m}^3$ , standard at 25  $\mu\text{g}/\text{m}^3$ , over average in 13 provinces from totally 18 provinces. Ozone was found at high hourly average in each stations at 121 ppb, standard at 100 ppb, over average in 24 provinces and showed increases trend. VOCs in order of benzene was found over average in 3 provinces from 7 provinces had monitored, but slightly decrease in Bangkok, Chiang Mai and Rayong provinces, while in 9 Northern provinces and Na Phalansubdistrict, Saraburi province had the highest average.

In 2017, 9 Northern provinces, the highest level of particulate meter was found at 237  $\mu\text{g}/\text{m}^3$  in Lumpang province decreased from last year, at 317  $\mu\text{g}/\text{m}^3$  in Chiang Rai province. The standard of air quality exceed daily was decreased from 61 to 38 days (38% down) and the number of heat spot in each provinces was down to 5,409 from 10,115 spot (47% down). The factors to improve a good trend of haze is an effect from activities integration by minister of interior, head of troubleshooting under the prevention and mitigation act B.C. 2017 and directly as single command by governor.

Na Phalansubdistrict, Saraburi province, the problem of over average particulate level was increased from 89 to 107 days, since 2016 to 2017 (20% up). The average was found at 19-257  $\mu\text{g}/\text{m}^3$ . One of factors that cases of problem released from the vents of industrial factories, the crushing processes in stone mills and communication in the area.

Regarding the state of waste management in 2017, the total amount of municipal solid waste generated nationwide was 27.40 million tons, increased 340,000 tons (1.26%) from 2016. Because of a populations growth and an expansion of urban, while waste generation rate per person decreased from 1.14 to 1.13 kilogram per person per day during last year. In order to force of management and cooperation in local authorities, populations and private sectors to reused, recycle and change behavior.

Waste management compare 2016 with 2017 showed correct waste disposal capacity increased 9.57 to 11.7 tons (22% up), reused increased 5.80 to 8.52 tons (47% up) so incorrect waste disposal capacity decreased 11.69 to 7.18 tons (39% down). However, reasons to less efficiencies were waste fees rate inconsistent with price cost, sorting waste from sources had discontinuous in case of some importers had mixed waste also incorrect to academic principles, some area had combated from people, non-corporative and less awareness from people, travelers and entrepreneurs to reduce and separate waste after their used and products used conclude covers product had a long time to degradation.

City and town municipalities has 23 top to good waste management were Changrai, Nakhonsawan, Udonthani, Sansook (Chonburi), Nan, and Sukhothaimunicipalities ect. And still improve to increased efficiency in 26 municipalities example Nakhonsrithammarat, Nakhonratchasima, Nakhonphanom and LeamChapong (Pattaya) ect.

The amount of household hazardous waste was 606,319 tons (9.80%) in case of waste management system in communities, municipalities and co-sector has a point to collect waste generate from household, corporation from governor and private sector in Bangkok to collect waste example electrical and electronic equipment waste and communities waste including 2,781 points. However, hazardous waste still mixed with general waste because of the collection, transportation and disposal are not covered by all areas. Lack of regulations on the separation of hazardous waste from the community from general waste. The hazardous waste collection center of the community is waiting to be dispatched to eliminate the problem correctly according to the academic principle, mainly in the central region and not in the whole country. Treatment / disposal is insufficient. Some electronics and electrical appliances are being recycled incorrectly. And no sorting of hazardous waste from homes.

## **Environmental management guidelines**

### **Wastewater management**

- Controlling the quantity and reduction of pollution of wastewater sources, such as the production and consumption of environmentally friendly products and services. Good agricultural practices and banning the pollution outside.
- Consider wastewater management since establishment and renewal and during the operation
- Licensing or renewal of the license requires standard pollution control. It is a condition or regulation for the operator to comply with and control the drainage system with Permit System.
- Total wastewater treatment is required in all densely populated communities, especially on the waterfront.
- Adjust the management of wastewater treatment systems in areas that there is a lack of availability.
- Reform the wastewater treatment system as one of the public utilities like electricity, water supply

### **Air pollution management**

- Upgrade standards to reduce emissions of vehicles and fuel to an international level (EURO 5).
- Promote the use of eco-friendly vehicles such as Eco Car, Electric Vehicle (EV)
- Create a mass transit system connected to the main route so that people are more convenient to travel with public transport. To reduce the use of personal cars.
- Prevent and correct northern fog according to system and mechanism. Increase social pressure. People who fire instead of putting pressure on those who fire.
- Organize the mining license. Strict enforcement of mining, quarrying or quarrying operations and cement plants to comply with the law. And the operators of the quarry and the cement plant declare their commitment to the public not to affect the environment and social responsibility.

### **Waste Management and Community Hazardous Waste**

- Campaign for people to separate waste before dumping into the tank. Especially food waste. Waste can be recycled, hazardous waste, including electrical and electronic products.
- There is a community hazardous waste management system that provides drop-off points nationwide. For the local government to collect the correct disposal.

Local authorities have a system for sorting, collecting and disposing of garbage. And centered Recycling of waste• Allow the private sector to participate fully in the management of solid waste and hazardous waste to improve waste management.