



## Preventing the harmful effects of air pollution

### Situation update

- On 21 April 2018, a garbage fire began in the Htein Bin landfill area, 40 km on the outskirts of Hlaingthayar township in Yangon Region. The main cause of fire was probably due to the build-up of methane gas from rubbish damp. The Yangon Region Government installed pipelines to allow trapped methane gas to escape outside. Myanmar Fire Services, members of Police Force and Armed Services came together to tackle the fire.
- To date, several mobile clinics have been set up by Yangon Region Health Directorate to provide health care to affected people. Approximately 60 ambulances are on standby. Reportedly, 19 persons were hospitalized. The majority of whom were fighting the fire. Some have already been discharged. The firefighters successfully controlled the situation and are in process of extinguishing any residual fire.
- While the situation is under control locally, the public health messages contained in this factsheet may be useful to help protect against harmful effects of air pollution. Furthermore, the national and regional authorities are in the process of improving monitoring and response capability.

### Possible health concern

- Any health impact of air pollution depends on the level and duration of exposure. Individual sensitivity to any health impact of air pollution varies.
- Short-term exposure can cause acute health reactions, such as irritation in the eyes, nose, and throat, coughing, wheezing and acute respiratory infections.

- Prolonged exposure to air pollution can lead to increased risk of respiratory infections, exacerbation of asthma, bronchitis or serious chronic effects including heart disease, stroke, and cancer.
- Respiratory symptoms are a particular concern in households where use of wood, agricultural waste and animal dung is used for cooking, heating and lighting.

### Who should be cautious?

- People with pre-existing conditions such as asthma or cardiovascular diseases are at greater risk in the affected area.
- Construction workers, traffic police, road sweepers and those working outdoors in the affected area
- Children under-five, older people and pregnant women in the affected area

### What can be the symptoms?

- Chest pain or chest tightness particularly while exercising
- Increased heart beat
- Breathlessness especially during physical activity
- Coughing
- Affected vision, eye irritation
- Reduced alertness and fatigue

*Note: Consult health professional, or visit health facility, if you experience any of above symptoms.*

## Precautions for affected areas

- Reduce your exposure to air pollution to the extent possible.
- Close external doors and windows to reduce pollution from outside.
- Stay indoors as much as possible.
- Avoid heavy exertion outside.
- Avoid unnecessary motorized travel.
- Do not smoke tobacco products.
- Do not burn leaves, garbage, crop residues, plastic or other materials.
- Keep homes clean.
- Wet mopping is preferable to sweeping or vacuum cleaning, as it avoids stirring up dust particles.



- Eat balanced diet especially fresh fruits and vegetables — to help boost immunity.
- Drink plenty of fluids especially water — to prevent dehydration.
- If you have to be outside in the affected area for long periods of time, use special mask.

For more information please visit WHO website:  
[http://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](http://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)

## Preventing harmful effects of air pollution: Recent garbage fire incident

### Situation update

A garbage fire broke out on 21 April 2018 in the Htein Bin landfill area, Hlaingthayar Township, Yangon Region. The garbage fire came under complete control on 2 May 2018, twelve days after its start. This was possible as a result of hard work and strategic approach by firefighters, by local and central authorities from different sectors as well as volunteers. Though the fire has been successfully extinguished, surveillance of the affected area continues in case of any new event. Further, a total of 40 patients were reported hospitalized and all of them were cured and discharged from hospital as of 12 May 2018.

While the situation is fully controlled, it may be helpful to provide some key facts and messages.

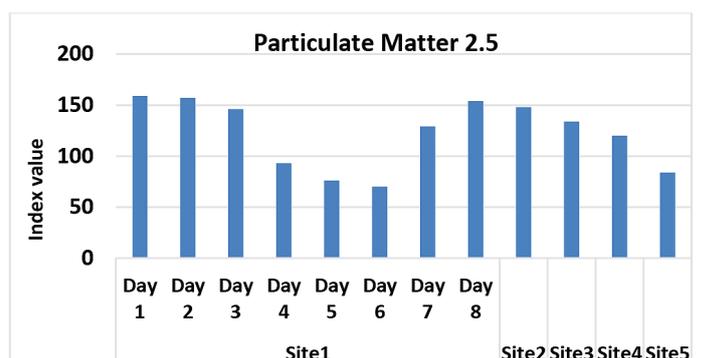
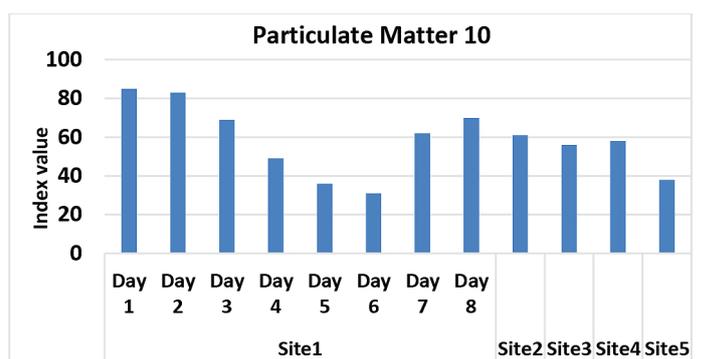
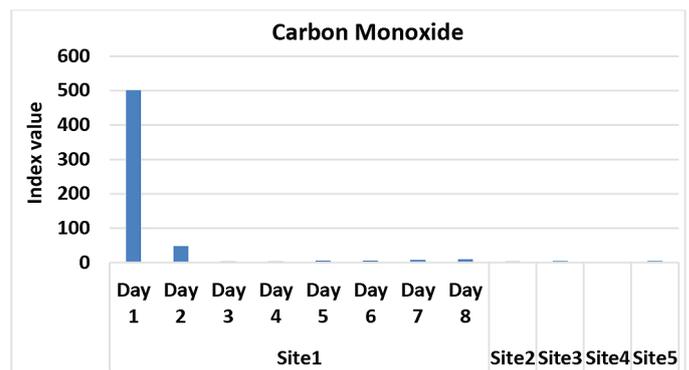
### Air quality monitoring

- It is not unusual that landfill garbage sites emit gas containing different pollutants.
- Local and central health authorities together monitored key pollutants in 5 different sites near the affected area.
- The map below is an aerial view of garbage site with the air quality monitoring points. These are denoted as sites 1 to 5.



- The monitoring points measured different pollutants shown in the adjacent graphs which were also used to calculate the 'Air Quality Index'.

**Note for graphs: Day 1 = 24-25 April 2018 through to 4-5 May 2018 (with a break between 27-28 April 2018). In site 1 monitoring was done for 8 days while in sites 2-5, it was only for one day.**



Source: Ministry of Health and Sports 2018

- Monitoring results are displayed in the graphs 1 to 3. An index value between 0-50 is considered 'good'. Likewise index value 51-100 is moderate, 101-150 is unhealthy for sensitive groups, 151-200 is unhealthy, 201-300 is very unhealthy and 301-500 is hazardous.
- Air quality index (AQI) of carbon monoxide and particulate matter-10 were considered 'good' (index value 0-50) whereas AQI of particulate matter 2.5 were from moderate to unhealthy for sensitive groups (index value 51-150).

### To keep us healthy the key messages are:

- Different air pollutants (e.g; carbon monoxide, fine particulate matter, sulphur di-oxide) can adversely affect health.
- Health impact is dependent on the type and level of pollutants as well as duration of exposure and individual sensitivity.
- Short-term exposure of particulate matter can cause acute health reactions, like irritation to the eyes, nose and throat, coughing, wheezing and respiratory infections.
- Prolonged, continued exposure (either low or high level) of air pollution can increase risk of respiratory infections, exacerbation of asthma, bronchitis, reduced lung function, ischaemic heart disease, stroke, lung cancer and premature death.

***Note: Finally and always important – consult health professional, or visit health facility, if you feel unwell or experience any adverse effects from air pollution.***

For more information please visit WHO website:

[http://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](http://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)

### What you can do

- Take all available measures to minimize exposure to air pollution.
- Avoid adding to air pollution yourself.
- When exposed, remain indoor as much as possible, particularly those at risk, children and elderly people.
- External doors and windows should remain closed to reduce penetration of pollutants from outside.
- Avoid prolonged or heavy exertion outside.
- Stay hydrated.
- Prevent sources of indoor air pollution.
- Keep the inside clean – workplace or home.
- Stop *unnecessary* travel by car or other motorized vehicles.
- Masks may help in special circumstances if you have to be outside for long period of time.
- Masks need to be of special type and require fitting.
- Regular monitoring of air quality is recommended

