

## IN THE NEWS

**S**EPT 26 was World Environmental Health Day, an annual event recognised by the International Federation of Environmental Health. In light of air pollution issues, the theme this year was "Indoor and Outdoor Air Quality".

This topic is timely as air pollution has been **campaigned** by environmental scientists, nature lovers and non-governmental organisations.

Declining air quality has become a global concern since most of the world population are living in areas with high pollution levels, according to a World Health Organisation (WHO) report last year. The report also said it was estimated that more than six million deaths had been associated with exposure to indoor and outdoor pollution.

Some of the **culprits** of outdoor pollution are:

- **INDUSTRIAL emissions;**
- **TRAFFIC emissions;** and,
- **BURNING** of agriculture crops.

Sources of indoor air pollution include second hand tobacco smoke and household emissions from furniture or cooking, such as the use of traditional cooking stoves. Air pollution is also influenced by meteorological factors, and this in turn affects the **concentrations** and **relative contributions** of the air pollutants.

Generally, air pollution occurs when the mixture of solid and **gaseous particles** (including fine and coarse **particulate matter**), bioaerosols, nitrogen dioxide, ozone and carbon dioxide are released into the air. These air pollutants will undergo chemical or physical transformation, before causing **adverse** health effects to the unprotected **receptor**, particularly human population.

Who is at risk to air pollution? Children, pregnant women, elderly and people with pre-existing respiratory or cardiovascular disease have been shown to be at increased risk to **acute** or deadly health impacts.

The former chief of WHO, Dr Margaret Chan, has said air pollution causes death to 600,000 children yearly and is more terrifying than

# Act fast to address air quality decline



An unhealthy level reading of the Air Pollutant Index (API) in Kuala Lumpur during the haze in 2016.

Ebola or HIV. Interestingly, researchers found consistently higher fine particulate matter and nitrogen dioxide levels in children's breathing, which are from vehicle exhaust pipe fumes.

With the repeated haze problem in Malaysia, it gets harder each time to improve our air quality levels. But, we cannot continue to blame our neighbours. We need to be responsible and mature. There, however, has been progress on efforts by our government and neighbours to address the problem.

It's been reported that we produce more gas emissions when we are in cars during traffic jams. The pollutants that are released into the air are dangerous to **pedestrians**. Our local researchers found travelling via mass rapid transit may cut our risk by 183 deaths from fine particulates exposure and reduce 337,800 tonnes of carbon dioxide annually.

We should remember that Malaysia has the highest rate of obesity in the Asian region and that cardiovascular disease is the leading cause of death in Malaysia. A majority of us spend 70 to 90 per cent of our time indoors, thus we need to ensure that our indoor air quality is at its best.

With effective policies and close monitoring of toxic emissions, we should be able to tackle air pollution.

We want the people to breathe cleaner air in Malaysia. Perhaps we should start to see the value of open real data (information that is readily available for all) and this will make them more engaged and aware of how air pollution affects them. The application of Internet of things (IoT) for air pollution monitoring may enable the information to be sent or received by the user.

Malaysia has been dubbed "air-pocalypse" owing to scientific evidence of declining air quality and health effects. Therefore, we need effective measures to fight and control air pollution, especially in this era of Fourth Industrial Revolution.

From NST dated Sep 29  
by Dr Nor Eliani Ezani

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## GLOSSARY

**in light of** [in + lahyt + uhv]  
considering

**campaigned** [kam-peynd]  
fought for a particular goal

**culprits** [kuhl-prits]  
causes of a problem

**emissions** [ih-mish-uhns]  
production and discharge of something, especially gas

**concentrations** [kon-suhn-trey-shuhns]  
the amount of a particular substance

**relative contributions** [rel-uh-tiv + kon-truh-byoo-shuhns]  
amount of something in comparison to others

**gaseous particles** [gas-ee-uhs + pah-r-ti-kuhls]  
tiny fragments of molecules in gas

**particulate** [pah-r-tik-yuh-leyt]  
relating to or in the form of minute separate particles

**adverse** [ad-vurs]  
harmful

**receptor** [ri-sep-ter]  
A structure, found on the surface of or within a cell, that can bind to a hormone, antigen, or other chemical substance and begin a change in the cell.

**acute** [uh-kyoot]  
severe

**pedestrians** [puh-des-tree-uhns]  
those who travel by foot

**FOR DISCUSSION**  
Do you think cars should be banned from city centres? Give reasons to back your views.



## ACTIVITY BOARD

**TASK:** Identify the true and false statements based on the article.

No.	Statement	True/ False
1.	The International Federation of Air Quality is the international body that give recognition to the annual World Environmental Health Day.	
2.	One of the campaigners for air pollution is environmental scientists.	
3.	The World Health Organisation (WHO) reported that most of the world population are living in areas with high pollution levels.	
4.	Exactly six million deaths had been associated with exposure to indoor and outdoor pollution.	
5.	The use of modern cooking stoves is one source of indoor air pollution.	
6.	Air pollutants transform chemically or physically before causing adverse health effects to humans.	
7.	Healthy children, pregnant women and elderly people have been shown to be at increased risk to air pollution.	
8.	Malaysia has been dubbed "air-pocalypse" because there is scientific evidence that air quality is declining and is affecting health.	