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Haze and Air Pollution: The Potential Health Crisis

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Synopsis

The link between environmental health and health security has always been understated. The lack of multi-sectoral mechanisms to address the health consequences of air pollution caused by forest fires can have detrimental effects on the region's critical social infrastructure – its people.

Commentary

ASEAN POLICYMAKERS, both regional and national, need to be more concerned about the consequences of haze on public health. Every year, with the hazy skies come also more cases of respiratory infections, cardiovascular complications and skin and eye irritations. This has deep implications for health security.

Political leaders in ASEAN need to be reminded of the estimated 100 million people in Southeast Asia who were exposed to acute health risks during the 1997 haze episode, more so since pollutant concentrations in the past week broke 1997 levels, causing increased public anxiety.

Finding room to breathe: Beware PM2.5

Back in 1997, an estimated 20 million Indonesians suffered from respiratory problems and thousands died prematurely due to complications arising from haze-related health hazards. An estimated 18 million Malaysians were also exposed to health risks.

In the past week, a rapid increase in respiratory infections has already been reported in the city of Dumai and Bengkalis regency in Indonesia's Riau province. Over in Malaysia, Johor Baru also reported a rise in respiratory infections. Malacca shut down 200 schools and Muar is in a state of emergency because of the haze. Overall air quality has worsened in Riau province, Singapore and Malaysia.

Singapore's haze monitoring hinges on the Pollutant Standards Index (PSI). Less well-known to the public is the level of fine particles (known as PM2.5, PM stands for particulate matter) in the air, though these figures are available on government websites. These particles are the major cause of adverse health effects as they settle deep in the lungs and interfere with lung function after long exposure. Not only can they penetrate indoors, they can also accumulate and build up.

Also, the sulfates, nitrates and ammonia suspended in the haze not only affect environmental health but also

physical activity. Those with existing respiratory infections and cardiovascular ailments, and even healthy individuals, are deprived of any semblance of a healthy lifestyle.

Haze and non-communicable diseases (NCDs)

ASEAN already bears a heavy burden from NCDs, such as cardiovascular and respiratory diseases, cancers and diabetes. Haze, and the resulting air pollution, merely adds fuel to the fire. The inhalation of particulate matter from the forest fires have potentially serious repercussions for the general health of those already suffering from NCDs, particularly those from the more vulnerable segments of the population, who cannot afford treatment or worse, cannot access health care.

Such health risks would complicate the efforts of ASEAN countries to reduce the incidence of chronic diseases.

Air pollution - whether during haze episodes or not - not only affects people with NCDs. It could in fact itself contribute to NCD increase. The World Health Organisation (WHO) warned last January that long-term exposure to PM2.5 can trigger atherosclerosis (a chronic heart disease that shows no symptoms), adverse birth outcomes and childhood respiratory diseases.

Outdoor air pollution causes at least 22 per cent of the global burden of death and disease from ischaemic heart disease (a condition of reduced blood supply to the heart) – one of the targets of WHO-led efforts to combat NCDs. The estimated tens of thousands of people affected each year by air pollution from the haze can place heavy pressure on national health systems.

Health security and air pollution

An approach that is reactionary, where countries simply take action only when the haze gets in everyone's eyes and lungs, would be counterproductive to current efforts to combat NCDs. ASEAN countries have yet to standardise the reporting of air quality which is mandated in the 2002 ASEAN Agreement on Transboundary Haze Pollution.

Policymakers need to see the bigger picture which paints a drier climate. Predictions that the dry season will be longer this year warrant sustainable long-term planning and action.

Aside from the haze agreement, ASEAN can utilise the capacities of cities and local governments who benefitted from multi-year environmental health projects such as the Clean Air for Smaller Cities Project (2009-2012) implemented under the ASEAN Working Group on Environmentally Sustainable Cities. These projects can inform if not support the necessary health policies that address the hazards of air pollution to health and would require the collaboration and cooperation of other regional sectoral bodies such as the ASEAN Taskforce on Non-Communicable Diseases.

The annual haze episode is a constant reminder that the region must act not only to improve regional air quality but also to acknowledge the primacy of the health of its populations. Since the air we breathe is a global public good, there is a need for renewed and sustained commitment to ensure healthy air quality. It is thus more apt to state that everyone has a right to breathe healthy air – a right that cannot be trampled on by economic priorities.

Need for risk communication strategy

At this juncture, a risk communication strategy and robust health information and monitoring system in countries most affected by the haze are necessary. Singapore and Malaysia's hourly update of air quality levels set a good precedent for monitoring haze, but more needs to be done. This is especially so for hotspots in Indonesia where practical information is hardly accessible to the public.

At the regional level, ASEAN's Haze Action website (haze.asean.org) already offers vital information on hotspots but does not offer assessments of health risks from forest fires and the resulting haze - as mandated by the regional haze agreement.

Despite studies on air pollution in other regions, there is still need for research on the long-term health impact of recurrent exposure to haze in ASEAN. Such evidence can help raise public awareness on the hazards of haze. After all, it is the health security and overall welfare of the populations in ASEAN as a whole - not only of a single country - that is at stake.

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