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# Row over activist says AC a must in Kolkata

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KOLKATA: Joyashree Roy, a key member of the Intergovernmental Panel on Climate Change (IPCC) team that won the Nobel Peace Prize in 2007 has kicked up a storm by calling for large-scale air-conditioning of work spaces in Kolkata to not only improve productivity but also ensure good health.

Roy, who is one of the two Coordinating Lead Authors of the industry chapter of the 4th and 5th IPCC Assessment Reports, argues that the climate in Kolkata is so harsh for 10 months in a year that it is not conducive to work without suffering from heat-related diseases.

"AC is not a luxury in Kolkata. The high temperature and humidity in the city makes it an absolute necessity. At present, not even 2% of Kolkata's workspaces have AC. This affects the productivity of the workforce. More importantly, it has an adverse impact on the health. People suffer from heat stress, heat rash, heat cramps, cardiovascular diseases, dehydration and even diabetes in the long run. The only solution is to air-condition workspaces," the professor of economics at Jadavpur University and coordinator of the Global Change Programme said at an international symposium on combating climate change.

With the climate increasingly getting harsh with temperature and humidity soaring to peak levels more frequently in recent years than in the past, Roy argues that there is no alternative to air-conditioning.

She cites the most widely used and accepted index for assessment of heat stress in industry to argue her case. "According to the Wet Bulb Globe Temperature (WBGT) index (an empirical index that represents heat stress to which an individual is exposed), workability condition prevails in Kolkata during December and January only. In all other months, the parameters do not meet the index prescribed by International Labour Organization. Those who are work seven-eight hours a day without AC damage their health," said Roy.

While the WBGT threshold value for continuous light work is 30°C and 25°C for heavy work, Kolkata's monthly mean temperature during the day is higher than 30°C.

In the past four-five years, ACs have been installed in many office spaces and middle-class homes, an indication of the climate gradually turning more extreme. According to CESC that provides power to the city, the annual hike in power demand of 50-60 MW since 2010 has almost entirely been on account of new AC load.

Her suggestion didn't go down well with environment activists who questioned how Roy, who had for years advocated the need for low-carbon economy and sustainable development, was making such an argument. "Installing ACs to combat climate change is bizarre. Not only is it impractical and impossible to air-condition all the spaces in an economy such as ours, any attempt to do so will trigger huge power demand that will in turn lead to more carbon emission," said Bonani Kakkar.

Others also felt that there were other ways to mitigate the heat and relative humidity, including regulating outdoor work hours to avoid exposure to sun in the afternoon and building naturally ventilated work places through better architecture design and use of insulation material.

The study done by Roy's team claimed that adaptation strategies like working indoors, providing shade or summer wear does not help. "The baseline condition is such in Kolkata that unless AC is used, health will be damaged. Only air-conditioning can provide 100% workable ambience," she said.

Roy further argued that mitigation did not mean austerity in a country like India where per capita power consumption was abysmally low. "Can we ask a hungry person to have half a meal because food production is low? Similarly, we have to improve our baseline work condition to be more productive without health risks. For a developing country like India, the energy demand will increase exponentially and that is only natural. As mitigation strategies, we can look at installation of energy-efficient ACs and generation of green power to meet the demand," she added.

India's per capita power consumption is 90 watt against the world average of 313, China's 458 and 1,683 of the US.