**South Asian Brown Cloud Video Notes**

1. What is the South Asian Brown Cloud?
2. How does it affect climate change?

**“Women breathing high levels of air pollution during last month of pregnancy more likely to give birth to babies with much lower birth weight”**

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Women breathing high levels of air pollution during the last month of pregnancy are more likely than unexposed women to give birth to babies with a significantly lower birth weight, according to a study of the effects the air-quality controls introduced during the 2008 Beijing Olympics.

The temporary pollution regulations imposed on the Chinese capital during the Olympics had a measurable and positive impact on the weight of the babies born to mothers who were 8-months pregnant at the time of the games, scientists said.

It is the first time that researchers have been able to pinpoint the effect of air pollution levels on a particular development period in the womb, indicating the importance of clean air during the last month of pregnancy when fetal growth is the most rapid.

Although Beijing has notoriously high levels of air pollution, cities in Britain such as London also experience regular periods where EU limits are exceeded. An survey by *The Standard* newspaper found that seven out of ten Londoners believe politicians are not doing enough to curb pollution levels in the capital.

The findings in Beijing emerged from an analysis of nearly 84,000 births to mothers living in four urban districts of the Chinese capital before, during and after the 2008 Olympics, when the Chinese Government imposed strict curbs on vehicles and industry to minimize the impact of the city’s high levels of air pollution on competing athletes.

Scientists found that women who were in the eighth month of their pregnancy during the seven-week period of the Olympics-Paralympics benefited most from the cleaner air. They gave birth to babies who were on average 23 grams heavier than babies born to similar women in 2007 and 2009, when air pollution controls were not as strict.

“The results of this study demonstrate a clear association between changes in air pollutant concentrations and birth weight. These findings not only illustrate one of the many significant health consequences of pollution, but also demonstrate that this phenomenon can be reversed,” Dr. Rich said.

In the months leading up to the games, the Chinese authorities introduce a series of aggressive measures, such as prohibiting traffic, closing factories and even seeding clouds to make it rain. This resulted in a 60 per cent reduction in sulphur dioxide, a 48 per cent reduction in carbon monoxide, a 43 per cent reduction in nitrogen dioxide and a reduction in the number of particles in the air smaller than 2.5 microns, which can enter the blood stream through the lungs.

1. Based on these findings, what policy changes do you think the Chinese government should make in order to control air pollution?

Because the regulations were relaxed once the Olympics ended, the produced an ideal “natural experiment” to study the effects of high and low pollution levels on pregnant women and their newborn babies, the scientists said.

“Our study suggests that even a short term increase in air pollution in a normally heavily polluted city can have a public health benefit, and suggests that we should investigate by what mechanisms this is occurring,” Dr. Rich said.

Late pregnancy is particularly important for fetal growth because this is the greatest amount of physical growth and the time when there is rapid development of the central nervous system, as well as the cardiovascular and musculoskeletal systems, he said.

**Homework:** Research a city that has a high level of air pollution and fill in the following details:

City and Country:

Types of pollutants being emitted into the air:

Effects of the pollution on the general population:

Source in APA format: