

Human Overpopulation

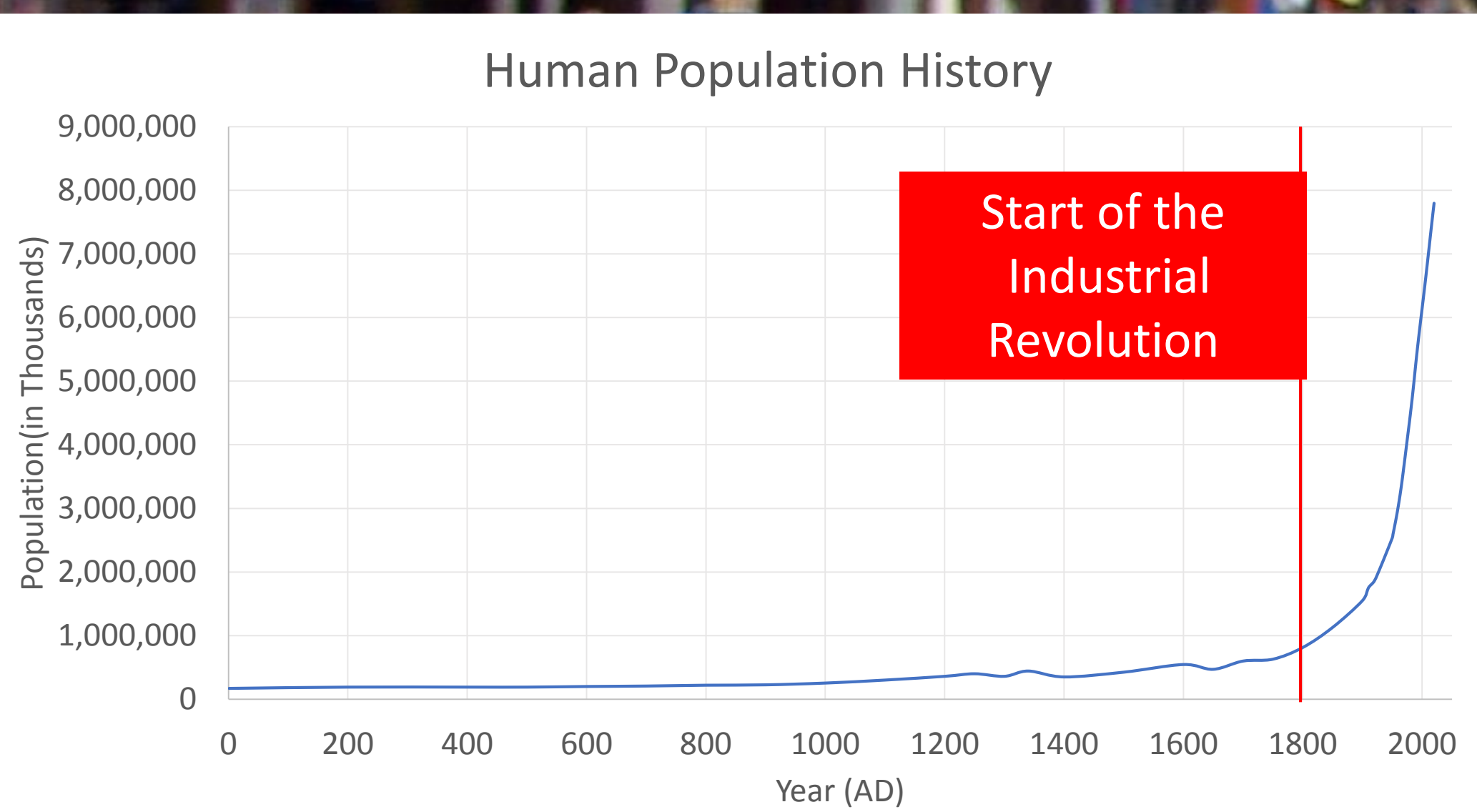
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Abstract

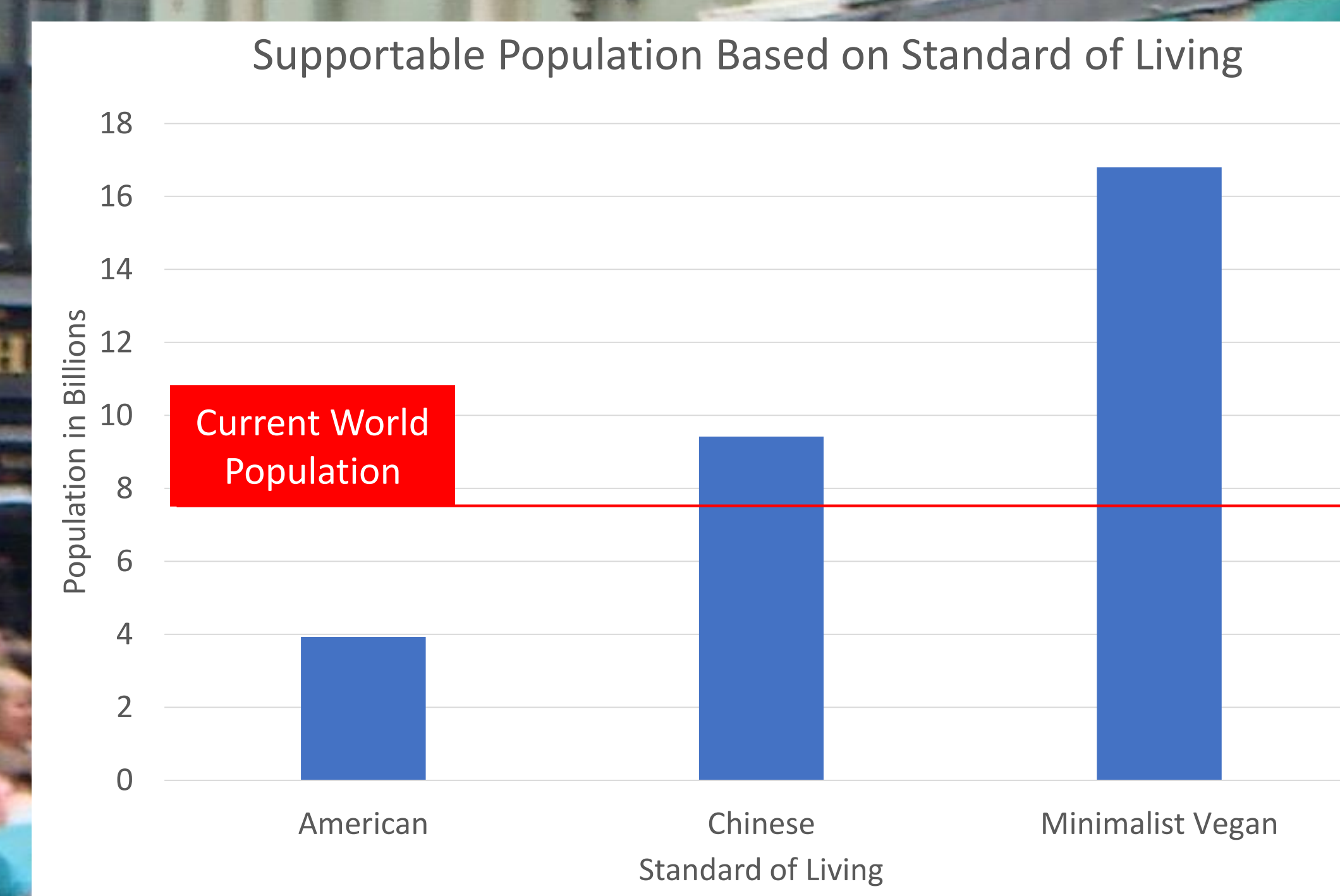
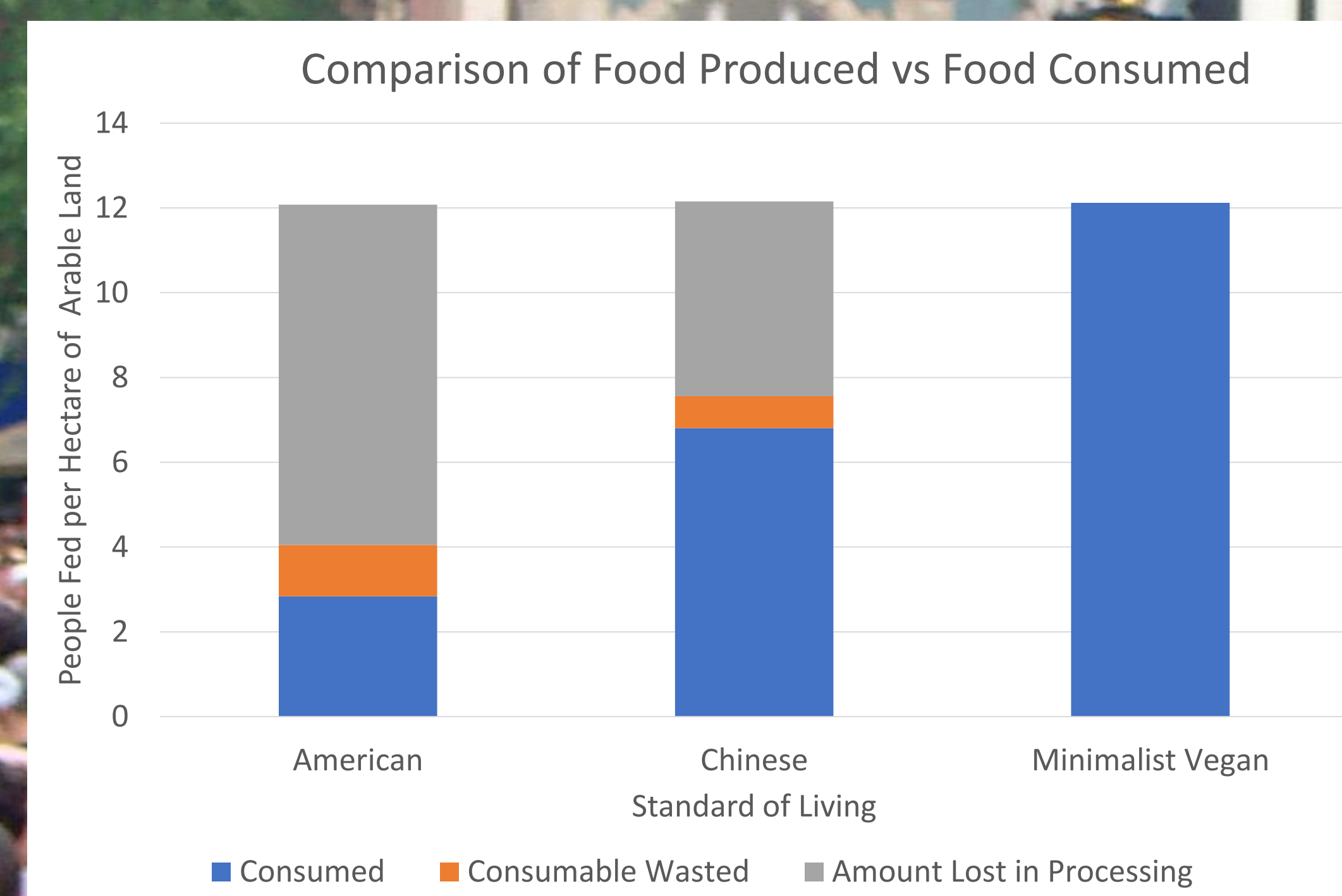
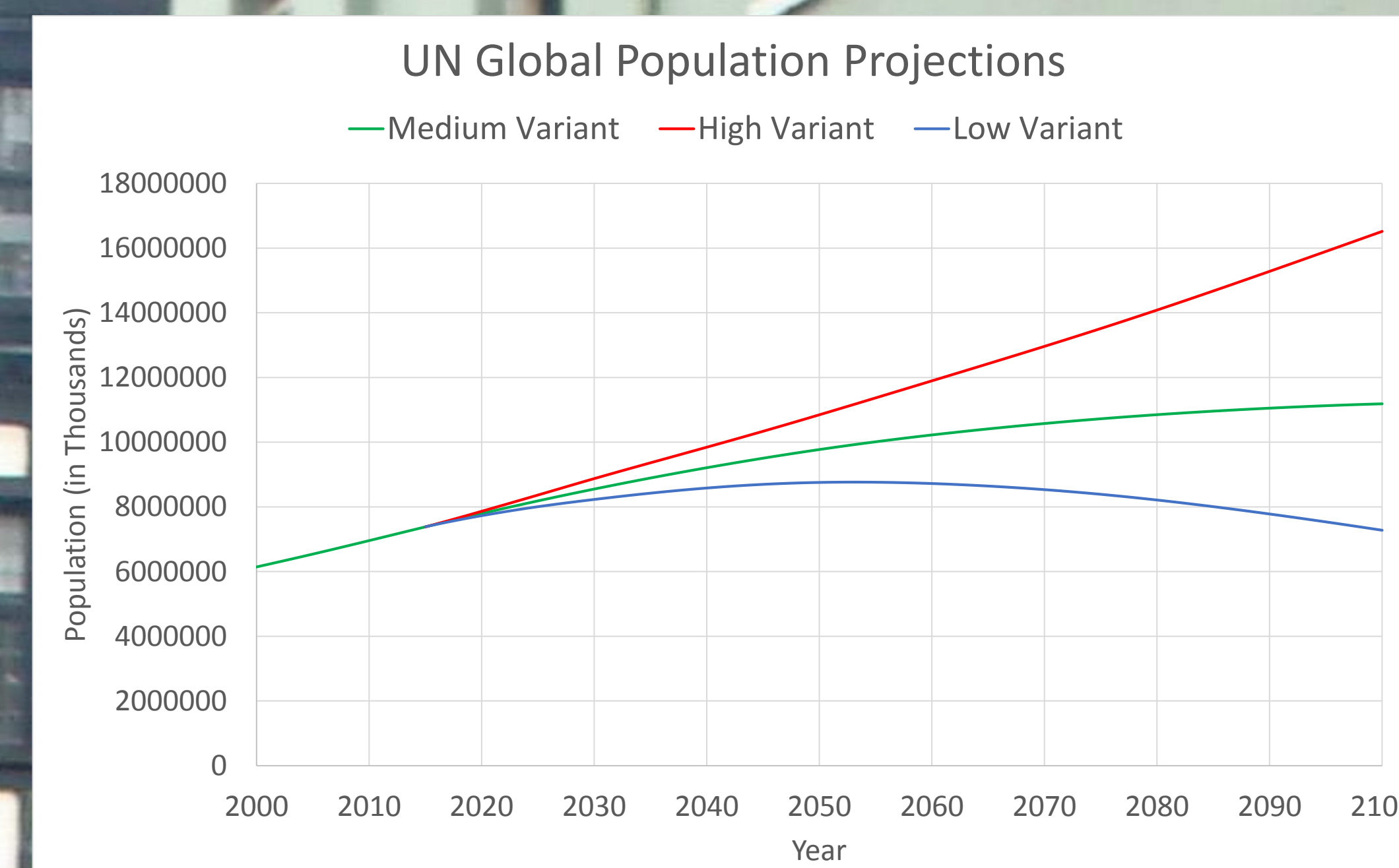
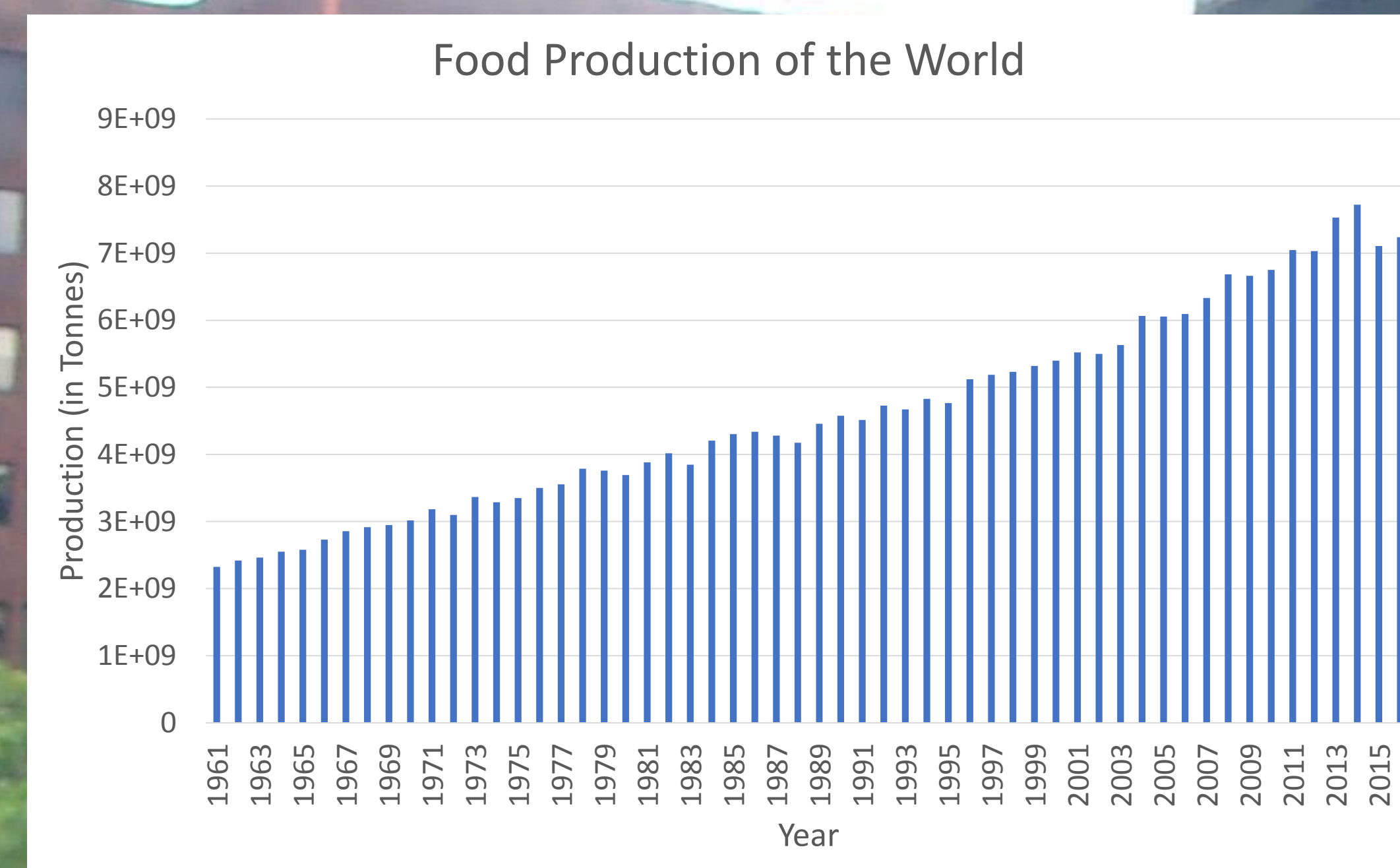
In this study on human overpopulation, we predicted a maximum carrying capacity using food as our primary limiting factor. This capacity was used to determine the sustainability of the human population. Afterwards, we considered other factors, such as technology, that could change the value. We used these predictions to determine if the human population was sustainable.

History of Human Overpopulation

The start of the Industrial Revolution and the introduction of fossil fuels into human society removed many of the limiting factors to human population, causing exponential growth.



Humans are depleting finite resources due to overpopulation



Methods

In order to calculate the maximum number of people the Earth could support, we considered different dietary styles, different daily caloric intake, and land currently being used for farming. We are assuming that all land used for farming is being used at maximum efficiency.

Waste

As a species we are currently wasting about 1/3 of the food we produce. Someone living in a developed nation wastes roughly ten times the amount of food as someone living in a developing nation every year.

Future Variables

Solutions

Our primary solutions are the education of women and ethical forms of population control. As described by Alan Ware, educating women, both in maternity and in general, reduces a region's population growth. This may not be enough however, and so more strict regulations may have to be put in place such as a one child policy. Such a drastic change would require the support of the people.

Technology

Advancements in genetic modification allow for increased crop yield without increasing the amount of land on which it is produced. Results can vary, with some implementations reporting 0% increased yield and others going as high as 37%.

Climate Change

Rising global temperatures threaten existing crop patterns and are predicted to lower crop yields by as much as 30% in the next two decades.

In the 1960s and 70s, there was a resurgence in the topic of human overpopulation, and several books, such as Paul Ehrlich's The Population Bomb, were published

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