**Tracing the Growth of The Global Community:**

**A Population Forecasting Analysis**

***Specification of Business Problem:***

Currently the world’s population reached nearly 8 billion which is gradually increasing in day-to-day life, it is more than three times larger than in the mid-twentieth century. It is estimated to be 2.5 billion in 1950 adding 1 billion people since 2010 and 2 billion since 1998. The world’s population is expected to increase by nearly 2 billion persons in the next 30 years, from the current 8 billion to 9.7 billion in 2050 and could peak at nearly 10.4 billion in the mid-2080s.

Overpopulation refers to an increase in the number of people that exceeds the actual capacity of the planet. Many factors support the bloom of population, such as reduced mortality rate, advanced healthcare services, etc. On top of everything, the industrial revolution has been accepted as one of the major causes of overpopulation.

Asia is known as the world’s most populated continent of the earth. It carries almost 61% of the global population, and the two countries China & India, are the major contributors. Overpopulation leads to various challenges causing [problems for the environment](https://www.earthreminder.com/types-of-environmental-pollution/).

The studies have shown that due to overpopulation, the coastal areas are set to experience annual flooding by 2050. Asia continent is at greater risk of flooding [due to climate change](https://www.earthreminder.com/climate-change-effects-causes-solutions/), low-lying land, and undoubtedly overpopulation. However, overpopulation has been a major issue for the whole world. Let us check out how it affects the environment and what are the main causes of overpopulation.

***Business Requirements:***

To Trace the growth of global community, we should be required with sufficient level of data on the population of people, who are extended around vast region. The growth of a region or country should be calculated over a time period

The population forecasting methods require the values of present and past population records to undergo the calculation. The local census records of a particular area provide the value of present and past populations.

The two categories of methods used for population forecasting are:

1. Short Term Methods
2. Long Term Methods

The ability to present the data and analysis in a clear and visually appealing format, such as charts and graphs and to use the data and analysis to inform strategic decision-making for the company or organization.

The business requirements for ‘Tracing the growth of global community’ includes  
 1) Accurate data on population growth and demographics for multiple countries and regions.  
 2) The ability to analyze and forecast population growth trends over a specific time period.  
 3) The ability to identify key factors influencing population growth and demographic changes.

***Simple extrapolative models*** are generally applied to project population totals rather than age- and sex-specific populations. Although atheoretical and based solely on past trends, their strengths include minimal data requirements, simple and quick calculation, and accuracy which is often comparable to, or better than, more detailed and complex methods

***Comparative*** (or ratio) ***methods*** create a small area projection through a relationship with an independent projection for a larger geographical area (e.g., for a state, large region, or country), and are also generally applied just to population totals.

How the population of a country will develop in the future depends on three determinants:

* fertility,
* net migration, and
* mortality.

The projection of a population usually takes the age- and sex-specific population numbers at a given point in time as the starting population. Based on these, the population is extrapolated into the future using estimates of the future development of fertility, migration, and mortality. Usually, mortality and (net) migration forecasts are broken down by age and sex.

A population forecast makes statements about the expected future population development and claims to predict this development “correctly”. Accordingly, the scientific literature repeatedly addresses potential sources of error in such forecasts to further improve the quality of service for urban planners, for example. The time horizon of forecasts can be of a short, medium or long-term nature, although the uncertainty of forecasts naturally increases with a longer forecast horizon. Uncertainties in population forecasts are therefore often quantified in terms of the probabilities of occurrence of the possible development paths.

Population forecasts offer a valuable basis for planning at the global level as well. The rapid growth of the world population is leading to an increasing demand for food. This development leads to new challenges because food production already causes major environmental problems today, which will become more acute in the future. Against this background, the connection between future population development and climate change is a central research topic and area of application of population forecasts. Moreover, according to the current study results, the growing world population is causing an increase in the global volume of waste. Therefore, population projections provide valuable information for economic cost evaluation of possible subvention programs, which aim at reducing garbage and wastefulness.