Directed Research Project
Fall Session, 2019

The Urgent Need to Reduce Population Growth

In Order Meet Green House Gas (GHG) Emission Targets

The urgent need to substantially reduce GHG emissions is well known and documented. Numerous studies have shown that we are currently on a path for an average world temperature rise of 3 – 4 degrees Celsius above pre-industrial levels by 2100. The UN’s most recent report has found that for world temperature to not exceed a 2-degree rise, GHG emissions must be reduced by 55% by 2030.

This Directed Research Project will argue that policies and programs to reduce world population growth should form an important element of the world’s efforts to reduce GHG emissions. The Project will build on the work of a Directed Research Project undertaken last year (Fall 2018). That project found that population growth has been and continues to be the major driver of world energy consumption and hence GHGs emissions. Indeed, the correlations are quite startling.
World efforts to reduce GHG are focussed primarily on transforming world energy consumption to green sources. These efforts have had some success. World GHG emissions are rising at a slower rate than world energy consumption. Nonetheless they are still rising steadily and show sign of leveling off, let alone decreasing.

Demographers have been arguing that the world’s climate change strategy should also include efforts to reduce population growth. They point out that the world’s population is soaring. It increased from 3 billion people in 1960 to 7.4 billion in 2015 and is projected to grow by another 4 billion people to 11.2 billion by the 2100. Given the strong correlation between population and energy consumption, it would seem self evident that efforts to reduce population growth should be a part of GHG reduction strategies. However, these arguments have largely fallen on deaf ears.

The purpose of this directed Research Project is to explore the reasons why policy makers have, for the most part, ignored measures to reduce the population growth rate as an important tool for addressing the challenge of lowering GHGs. There appear to be many reasons for this: historical misguided efforts, political, moral, religious and economic.

The Project will:

- Identify each of these various factors.
- Examine the key reasoning underlying each of them.
- Where possible and relevant, develop a strategy to address these concerns.
- Model the impact that population growth reduction strategies could have on reducing GHG emissions

A particular focus will be on how world economies have not been structured to function in a zero-population growth environment. Population growth is an important driver of GDP growth. A key premise underlying the economies of most nations is that growth must continue at a high pace in order to address debt and pension obligations. Time permitting, the paper will explore the adjustments required for economies to adapt to a low population growth environment and attempt to measure the size and complexity of these adjustments.

This Directed Research Project will comprise four activities.

1. Data gathering and document review.
2. Basic modeling of GHG emissions under several scenarios.
3. Analysis of the impact that significantly reduced population growth would have on world economies. The adjustments are likely to significant. Certain sectors such as construction would be highly impacted. Government funding models e.g. debt servicing funding of pensions would also be significantly affected.
4. Preparation of a paper summarizing the results of this activity.

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