



**On the eve of Golden Jubilee Celebration of ISEC and World Environmental Day
One-Day Seminar
On
Impact of Demographic Change on Society and the Environment:
Emerging Issues and Challenges for India**

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Introduction:

Demographic change through fertility decline is an emerging issue, and its relative impact on society and the environment has been drawn attention by the researchers in the recent decades in India. Demographic change has influenced on the changing size of population, household numbers, age structure of population, urbanisation etc., which are certainly found to be important proximate causes for an adverse impact on society and the resulted environmental degradation. Additionally, our current patterns of consumption such as the amount of energy and water use in homes, waste generation, the changing landscape and biodiversity loss have a greater impact on the environment than all the above demographic factors. In view of this, here an attempt will be done to address how the aforesaid factors through demographic change influenced to changing structure of the population and household characteristics, acquisition of electronic gadgets and automobiles and resulted in environmental pollution. On the other hand, the relationship of TFR decline and its influence on the increased share of elderly and youth population are also having certainly caused environmental decay in India.

The increase in nuclear families since 1991 is a potential source of environmental impact in different regions. Environmental pollution due to increased nuclear families is quite high, especially in the central and north-eastern regions. The

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highest decline of TFR is evident in the central region which has caused to relative impact on life expectancy at birth. The least decline in TFR in western and southern regions has shown a negative share of the youth population. Further, acquisition of TV sets, transport and non-transport vehicles especially, two-wheelers and four-wheelers are found higher in the case of the western, southern and northern regions of the country which consume more energy and have resulted in a higher environmental degradation here as compared to the other regions.

Background and Literature Review

There has been a growing interest in urban environmental issues, and, to some extent, in the role and impact of the wealthier middle classes (Baviskar, 2002; Chaplin, 1999; Dembowski, 2000). Despite much of the existing environmental literature intersects in various ways with the middle classes, there is relatively little work that takes the middle classes as the direct focus of attention, whether in terms of detailed ethnographies of environmental values and beliefs (Brosius, 1999), or in terms of more survey/psychometric approaches (Dunlap and Jones, 2002). However, the studies have indicated that population growth has been the major source of environmental problems (Ehrlich and Ehrlich, 1990; Kates, 1996; Smail, 1997). This conviction is leading to external pressure on demographers to pay considerable attention to the environmental consequences of demographic behaviour (Anne, 1998).

In the previous decade, demographers worked on linkage of population, poverty and environment at the global level with development (Aramburu, 1994; Cohen 1995a, 1995b; Davis 1945; Demeny 1991; Hogan (1992) McNicoll 1990, Tabutin and Thiltges, 1992, Anantha Duraiappah, 1996; Dasgupta et al, 1994; Harte, 2007). In India too, Jodha, Dewaram, Kumar, Saxena and Lakshmana (2008) worked on the relationship between population, poverty and the environment. Now, under the changing demographics, one should not blame the poorer and vulnerable population who were contributing to environmental decay, but also, the middle class and richer segment of population. Empirical demographic research on environment and development is modest at the national and international levels. In view of this, it is high time to make an attempt to

understand the linkage between fertility decline and its association with society as well as with the environment in India.

In demography, the first wave of environmental concern contributed to a profound change in thinking about the population and economic development (Anne, 1998). After the Second World War, population growth rates in developing countries rose to unprecedented levels, surpassing the food production growth rate due to a rapid decline in mortality. These declines seemed to be due to exogenous factors (e.g., the introduction of health technology) rather than endogenous economic and social change.

Studies have shown that a rapid population growth due to exogenous factors causing a decline in mortality might, in fact, prevent the very economic development that would normally lead to fertility decline (Demeny 1988; Hodgson, 1988). However, since the publication of the National Academy of Sciences (NAS, 1986), there has been a greater emphasis on demographic attention to environmental issues due to scientific evidence on global environmental effects and popular concern on environmental issues. However, the extent of empirical research in this field remains modest (Anne, 1998).

Thus, the question as to why environmental issues have not been more central is crucial. Demographers presumed that a rapid population growth imperils natural resources (Davis, 1945) and hence focused their research on the mechanisms by which population growth could be slowed, rather than on interactions between demographic and environmental variables. Other schools of demographers (Demeny 1988, Ehrlich and Ehrlich, 1990) are orthogonal, hinting that the central causes of environmental problems are not demographic and therefore, are not appropriate for demographic research. In conclusion, environmental issues have been peripheral to main areas of demographic research and have considered environment as a subsidiary issue in their analysis of population and economic development. Considering the third wave of environmental concern in the 1980s and 1990s, the environmental issues are now receiving emphasis from demographers (Anne, 1998).

The increase in life expectancy at birth in recent decades is due to decline in fertility, improved sanitation and increased health care in public and private

sectors (Caitlin McDonnell, 2018). This has a negative impact on the environment. The level of environmental effect varies widely in different countries. The Royal Commission on Environmental Pollution (UK) found that longevity of people will lead to higher environmental impact. Those aged above 75 years contribute disproportionately to carbon emissions from heating their homes, as they spend a greater amount of time at home and feel the cold more intensely. Further, the potential environmental impact of residues of pharmaceuticals released to the environment by excretion or disposal by the elderly is greater due to the use of more medicines than the younger people. A similar experience has been emerging in case of India. However, revealing the above, the author of C M Lakshmana, was the first to analyse the changing demographics and its relative impact on the environment in India and their relationship with total fertility decline, which has appeared in Economic and Political Weekly in 2018.

The changing demographic trends and consumption pattern in India have been responsible for eco-degradation and environmental pollution, and hence are a topical issue of current concern. Even though currently there is a fair understanding of how population is changing and the socio-economic implications of these changes, little attention is paid to their environmental impacts. Prima facie, there are at least three direct impacts of the decline in TFR. The indirect impacts can be measured by a primary survey effectively. The direct impacts are (1) reduction in population growth rate which results in slower addition to absolute population; (2) increase in the number of nuclear families, resulting in life style changes such as increase in demand for housing, electrical gadgets (washing machines, refrigerators, air-conditioners) and electronic gadgets (TV, computers, mobiles) thus increasing the overall energy use on the one hand and pollution (in terms of increased CFCs and e-wastes) on the other; (3) increase in the rate of elderly population, currently 12 per cent, who spend much larger time at home due to increased use of TV, computers and air-conditioners, thus increasing energy consumption and pollution.

Objectives:

The major objectives of the seminar are following:

1. An attempt will be done to understand how the changing demographics have influencing the changing structure of households and its relative impact on the society and the environment.
2. Focus will be given to drawn attention to reveal the relationship between TFR decline and its impact on the environment analysing: (i) TFR decline and its relative impact on the changing proportion of population by region; (ii) effects of nuclear families on the environment due to the use of electronic gadgets such as television sets (TV) and the use of energy; (iii) acquisition of automobiles (two-wheelers and four-wheelers).
3. Life expectancy and the changing share of elderly and youth population causing environmental problems are the other dimensions could be focussed for the seminar.
4. Analysing the relationship of fertility decline and the changing age structure of population as well as household characteristics considering the environmental impact, policy suggestions will be drawn to take precautionary measures by the Governments and community to mitigate environmental problems in the near future to conserve environment, health and well being of the society.