Population, Education and the Sustainable Development Goals

AAAS 2016

Wolfgang Lutz
Director, World Population Program, IIASA
Founding Director, Wittgenstein Centre
World Population Growth

... is sometimes called the elephant in the room because it is not explicitly mentioned in the SDGs although it matters greatly ...

- ... through the number of consumers and their impact on the environment (at given levels of per capita consumption),
- ... through making it more difficult to expand education, improve health and reduce poverty,
- ... through more people with higher vulnerability being exposed to natural disasters and other environmental change,
- ... through possibly increasing the likelihood of conflict and uncontrolled mass migration...
Some SDG Targets are directly relevant to Population Trends

- Reproductive health
- Child mortality
- Universal primary and secondary education
Chart 1. Historical trend and projections according to the medium scenario (SSP2) for the world population by six levels of educational attainment (see color coding). The additional lines superimposed...
Adding education to age and sex in population analysis

Education is the most important source of observable population heterogeneity after age and sex.

This matters because:

- Almost universally during demographic transition more educated women have fewer children, have lower child mortality, and more educated adults live longer. Changing education composition changes population forecasts.

- Education is a crucial determinant of individual empowerment and human capital, is a key driver of socio-economic development (public health, economic growth, quality of institutions and democracy, and adaptive capacity to climate change).
Assuming identical education-specific fertility trends, different education scenarios make a difference of more than 1 billion people by 2050.

- CEN gives the world population trend according to the most pessimistic scenario assuming that no new schools will be built.
- FT gives the most optimistic scenario assuming that countries can achieve the rapid education expansion that South Korea achieved.
ECONOMICS

The Demography of Educational Attainment and Economic Growth

Wolfgang Lutz,1* Jesus Crespo Cuaresma,2 Warren Sanderson3 (all IIASA)

2015: Sustainable Development Goal 4:

.... quality primary and secondary education

for all girls and boys .... .
Universal education is key to enhanced climate adaptation

Fund more educators rather than just engineers

By Wolfgang Lutz, Raya Mutararak, Erich Striessnig*

Over the coming years, enormous amounts of money will likely be spent on adaptation to climate change. The international community recently made pledges of up to $100 billion per year by 2020 for the Green Climate Fund. Judging from such climate finance to date, funding for large projects has been dominated by engineers and other technical professionals.

The best available information on the number of disasters and reported fatalities from around the world (5).

EDUCATE FEMALES, REDUCE FATALITIES. Because the literature on disaster vulnerability has conventionally emphasized economic growth while disregarding education, our statistical analysis focuses on the relative assessment of these two factors as measured by Gross Domestic Product (GDP)
Socio-economic challenges for adaptation

Socio-economic challenges for mitigation

Shared Socioeconomic Pathways (SSP) Logic

- **SSP 1**: (Low Challenges) Sustainability
- **SSP 2**: (Intermediate Challenges) Middle of the Road
- **SSP 3**: (High Challenges) Fragmentation
- **SSP 4**: (Adapt. Challenges Dominate) Inequality
- **SSP 5**: (Mit. Challenges Dominate) Conventional Development