

# »»» What connects the climate crisis with demographic trends?

One Pager

No. 4, 15 June 2022

Authors: Thomas Nice, Catherina Hinz, Editor: Heide Kühnken

Multi-country analyses show that population growth rates are well above average in countries severely affected by climate change. This makes it important to determine whether there are causal correlations between demographic trends and the climate crisis.

## Countries experiencing high population growth have had little impact on the climate to date...

The emission of greenhouse gases such as carbon dioxide is the primary cause of climate change. Given that every human being has an environmental footprint, an increase in a country's population can have a strong impact on emissions. Even so, population growth is currently concentrated in places where emissions per person are very low. Despite the high number of births, households in poor countries have, to date, made a minimal contribution to man-made climate change. The example of China, which now has a colossal population due to a historically high birth rate, shows how quickly this situation can change: Rapid industrialisation combined with falling birth rates has led to a significant increase in emissions per capita, meaning China has become the world's largest emitter of CO<sub>2</sub> within a few years. To limit the potentially negative impacts of a growing population on the climate, it will therefore be important to promote climate-friendly production and consumption practices in the emerging countries early on.

## ...but are especially affected by its negative effects

It is clear that population growth in the Global South plays a secondary role as a driver of the climate crisis at present. In addition to factors such as prosperity or education, demographics also strongly influence the extent to which people are affected by the impacts of

climate change (vulnerability) and are able to cope with them (resilience). In particular, this relates to:

- the *spatial distribution* of the population: Due to their geographical location, developing countries are already significantly more affected by the negative impacts of the climate crisis than the Global North. High demographic pressure in many of these countries also contributes to an increasing number of people migrating to areas where they are particularly exposed to climate risks and where infrastructure designed to protect the population is lacking. Such risks include vulnerable slopes, floodplains and regions that only allow for marginal agricultural yields. Indirectly, demographic pressure can also be a factor in accelerating climate change (deforestation, drainage of swamps, etc.).
- the *socio-economic situation*: Population dynamics are particularly high in poorer and more vulnerable countries for a variety of reasons, not least since options for protecting the population against the negative effects of climate change are severely limited there. This includes overwhelmed social security systems and a lack of financial resources to alleviate the situation in times of crisis or for preventive protective measures.

In addition to general climate adaptation and mitigation measures, development policy strategies primarily focus on reducing vulnerability (e.g. by investing in education, water and sanitation, and healthcare) and strengthening resilience (e.g. through drought resilience programmes or the expansion of adaptive social security systems).

## The repercussions of climate change on population development

Although climate change is already having a noticeable impact on regional population distribution (climate-related migration flows), there is little research to date on whether it is also having a significant impact on population figures. This may be partly due to contradictory developments: On the one hand, rising climate risks can increase mortality. On the other hand, crises often also impair the functionality of education and healthcare systems, which can lead to an increase in fertility either directly (due to limited access to family planning services) or indirectly (due to regression in the sexual and reproductive self-determination of women).

## Conclusion: Climate crisis is related more to consumption and production patterns than to demographics

While there are plausible interactions between climate change and population dynamics, the countries currently experiencing high population growth rates are not a key driving factor behind climate change. It is unclear to what extent the climate crisis will influence demographic trends in these countries in the future. The consensus is that development policy approaches to mitigating the problem primarily involve promoting climate-friendly production and consumption patterns. Nevertheless, effective measures to strengthen climate resilience and reduce vulnerability to the effects of climate change should take demographic trends into account. ■