

Eating the land that feeds you why every city should care about the impact of global urbanisation on cropland



Urbanisation is taking place at a fast rate at the expense of agricultural land. However, given that there is so much agricultural land globally and that cities are taking only a fraction of it, is this really an issue? A research team led by the *Mercator Research Institute on Global Commons and Climate Change* in Berlin (Germany) investigated the matter. Their research shows that the challenge is significant: up to 4% of global food production could be threatened by urbanisation. This is not only a problem for the countries where this occurs as this threatens global food supply. So every city should feel concerned about it and start sharing experiences with other cities about it.

Urbanisation will take place on the world's most productive cropland

Researchers have used spatial analysis and cropland datasets and applied urbanisation scenarios to estimate where urbanisation will take place. They found that urbanisation could lead to a loss of around 3% of global cropland. This corresponds to around 4% of crop production loss (compared to what was produced in 2000). **Areas that are likely to be urbanised in the future cover 4% of maize, 9% of rice, 2% of soybean, and 7% of global wheat production** (2000 figures). The researchers did not factor into their analysis the potential impacts of climate change or the upcoming changes in food demand due to urbanisation (indeed, urban population tend to consume more animal-based products, for instance). This means that their results can be considered a conservative estimate of the challenges ahead.

Urbanisation will hit first the most productive cropland, since cities have tended to settle next to good quality land to ensure their food supply. For instance, in Africa, only 3% of cropland will be lost, but this will lead to nearly 9% of production loss. For a country like Nigeria, a loss of 6% of cropland will translate into a 12% production loss.

Asia and Africa will be hit most, but all cities around the world should care

The researchers calculated that Asia and Africa are the continents that will be hit the most. Together, they will make up for more than 80% of the expected production losses. For instance, around Shanghai, urbanisation will take place on the land that currently produces nearly half of the rice and wheat of the Yangtze River Delta. It will therefore considerably impact the city food supply.

Such loss is everybody's concerns as **how these countries will tackle the issue is of global relevance**. Intensification of production, i.e. producing more on the remaining land, is only possible to an extent. Turning new land into cropland is another option, but that land is likely to be less productive than the one being lost. Therefore, one can only expect the global competition for land to increase.

Policies are struggling to tackle urban expansion: could cities work together on this?

Given the scale of the challenge, what are cities doing? Existing policies are struggling to prevent agricultural land to be urbanised. Indeed, urban land is expanding at a faster rate than urban populations.

More should therefore be done by all cities around the world. This could include the identification and protection of the most productive land, or work on urban forms (denser cities) or urbanisation patterns (following transport routes, for instance).

The governance of large metropolis should also be improved to ensure that administrative and functional boundaries match. This is often not the case as megaurban regions gather different cities, each having their own policies. Such governance challenges are as acute in the Global South as they are in the Global North.

Agricultural land protection is therefore a topic cities around the world should share more good practices about.

Albane GASPARD - October 2017

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