

# Indonesia's Rice and Coffee Market at Risk Due to Climate Change

Note: This is an edited version of the following article - see the link below for the full version.

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Indonesia is the world's fourth-largest rice producer, and possible crop failures due to climate change are likely to have a disastrous effect on the world's poorest people. Similar to rice, coffee production is also expected to decrease due to climate change and rising carbon emissions. Extreme climate conditions are causing a significant reduction in planted area and agricultural production which would result in a disruption in the global food supply and a rise in food price inflation, which will impact food security. Indonesia should work towards enhancing its climate adaptation capacity and mitigation efforts to ensure it can overcome the challenges coming in the future.

Indonesia is among the leading producers of rice and coffee in the world, and the country also holds a strong position in the global trade market. The country exported rice worth USD 3.9 million and coffee worth USD 852.9 million in 2021 making it one of the major players in these markets. There are concerns that a continuous rise in carbon emissions in Indonesia might impact the production of the two cash crops. A study by the UN titled "Impact of Climate Change in Indonesian Agriculture" has projected that continued climate change would cut Indonesia's rice production by millions of tons a year, cutting exports by a third, and leading to price increases of more than 50%. A similar trend will be seen in coffee production and yields, which will eventually add to the misery of high global coffee prices due to limited supplies.

Indonesia is the world's fourth-largest rice producer with annual production of over 30 million mt per year. Increasing climate change risks and subsequent fall in yields due are likely to have a disastrous effect on the world's poorest people. The report estimates that the impact of climate change will reduce Indonesian rice production by 3.5 million mt, which is equivalent to fulfilling the rice consumption of 17.7 million people. Without serious mitigation efforts to shift away from fossil fuels globally, the sea level might rise, resulting in an increase in the salinity of soils. The global impact will be much larger, with a 50% loss of productivity amounting to a decreased production of 8 million mt or the equivalent of the rice consumption of 42 million people. This means that there will be a significant increase in world rice prices as the supply will fall while the demand will remain the same or even increase.

Similar to rice, coffee production is also expected to decrease due to climate change and rising carbon emissions. The report does not project any numbers for coffee, but it highlights that the number of days where the temperature and rainfall conditions are optimal for coffee cultivation in Indonesia will be reduced by 50% by the end of the century.

With reduced production and lower yields, Indonesia's coffee exports may fall by around 20–35% due to climate change issues. The authors of the report have projected an increase in coffee prices for both Arabica and Robusta varieties of around 32% by 2050 and 56–109% between 2050 and 2100.

The report makes it clear that Indonesia's decreased rice and coffee outputs will have an impact on the global supply chain, food price inflation, and food security. Extreme climate conditions are likely to cause a significant reduction in planted areas and agricultural production. Countries like Indonesia, which are vulnerable to these changes, must enhance their adaptation and mitigation efforts to ensure food security. The economic costs of the impacts of continued climate change on agricultural production show that it is essential to make stronger commitments to manage climate risks and stabilize food supplies, which are essential for achieving Indonesia's development targets.