

Will the Russian-Ukraine war trigger a famine in Sri Lanka?

BY DR. RANMALEE BANDARA

On February 24, 2022, Russia launched a full-scale invasion of Ukraine, and the situation is getting more and more unpredictable as time flows by. The former US President Donald Trump said last Saturday that the situation in Ukraine will get worse, claiming Russian President Vladimir Putin would not stop his war, while billionaire Bill Ackman has warned that the World War III has “likely started already”.

Some security experts believe that the World War III has already started, while others say it is only a matter of time until Russia's invasion triggers a global conflict.

You might ask ‘what does that have to do with us here in Sri Lanka?’, or you may simply think ‘who cares? First and foremost, let us have a look at who Russia and Ukraine are. Together, Russia and Ukraine account for nearly 30 percent of wheat, 17 percent of corn, 32 percent of barley, and over 50 percent of sunflower seed oil exports.

In fact, Ukraine is known as the ‘bread basket of the world’ given that 25 percent of the world's famously fertile black soils – chernozem – can be found there.

At present, the farmers are at a crucial stage in the agricultural season where inputs like fertiliser, seeds, and water will decide the yield of the upcoming harvest, and the most extreme calculations predict a 50 percent loss in yield by the next harvest if these inputs do not find their way to the lands.

The question is, who will tend to the farms in Ukraine now?, because all males between 18 and 60 years of age are required to fight for the country, while many flee the country since the EU has said that their border doors will be open for refugees during the next 3 years.

As such, the Rome-based FAO (Food and Agriculture Organization) stated that they are unclear whether Ukraine would even be able to harvest crops if the war were to continue. They further predict that between 20 percent – 30 percent of fields used to grow winter cereals, corn, and sunflower in Ukraine will either not be planted at all, or remain unharvested during the 2022/2023 season.

EU countries

Not only will the halt in wheat exports from Ukraine and Russia influence EU countries quite nastily, but the impacts to both the meat and dairy industries will also be massive. This is because Ukrainian corn is essential for livestock feed, and statistics show that roughly 12 percent of corn is consumed for food, whereas 60 percent is intended for livestock feed.

We could argue that large grower countries like Australia, Argentina, India and the United States, could make up for a portion of the grain shortfalls from Ukraine and Russia. The operative word here is ‘portion’, implying that only a part of the deficit is expected to be met.

Additionally, FAO has said that “worryingly, the resulting global supply gap could push up international

food and feed prices by 8 to 22 percent above their already elevated levels”, increasing the global number of undernourished people by 8 to 13 million people in 2022/23.

They predict that the most rises would be seen in the Asia-Pacific region, where Sri Lanka is, followed by the sub-Saharan Africa, the Near East, and North Africa. By now, the UN's World Food Program shows that 811 million people around the world go to bed hungry, with the number of cases of acute food insecurity jumping from 135 million to 283 million since 2019, as a consequence of the Covid-19 pandemic.

The majority of scientists in Sri Lanka (and their allies overseas) started an ongoing argument in 2021 that Sri Lanka will soon face a famine due to the Government's stance on importing and subsidising synthetic chemical inputs.

If we had been curious about the happenings in the world around us, it would have been obvious that the synthetic chemical fertiliser prices had almost doubled in the last 12 to 18 months (50 tons of urea exceeding \$1,000 by December 2021), long before the Russo-Ukraine War.

There are many reasons for this, but the main culprit would be the global energy crisis. This is because the most important types of fertiliser are Nitrogen-based, and processed using coal or natural gas. As a consequence, some fertiliser plants in Europe reduced their production or closed down, while China cut down fertiliser exports in April 2021 to maintain their domestic supply.

Add the elevated freight tariffs, and extreme weather, including hurricanes in North America, to the equation and we have a situation where fertiliser production and global shipments reduced drastically.

Insult to injury

The sanctions imposed on Belarus, the 3rd largest global producer in potash (18 percent), by the EU, UK, US and Canada in December 2021 tipped the scale further. Adding insult to injury, we observe that Russia is also a major exporter of fertiliser to the world, while 40 percent of the current gas supply to Europe is also from Russia.

Wall Street Journal has stated that from South America to Southeast Asia, high fertiliser prices are weighing on farmers across the developing world, making it costlier to cultivate and forcing many to cut back on production.

The International Fertiliser Development Centre predicts that the fertiliser demand in the sub-Saharan Africa could fall by 30 percent in 2022, meaning that 30 million metric tons less food produced, which is equivalent to the food needs of 100 million people.

What are ‘Russian monopolies’?

Oxford languages define ‘monopolise’ as “obtain exclusive possession or control of” or “have or take the greatest share of” something.

We all know about Russia's significant place in the global market when

it comes to energy – oil and natural gas, while it is a lesser known fact that their mineral and energy resources are the largest in the world.

We also know that it is the nation having the largest stockpile of nuclear weapons and the owner of the 1st human-made satellite (Sputnik I in 1957). What is not so openly known is their crucial position in the global fertiliser supply chain.

The global fertiliser industry includes three main categories: nitrogen, potash, and phosphorus fertilisers.

Potash is a potassium-rich salt fertiliser that enhances plant quality and is responsible for 20 percent of the global fertiliser demand. Russia (20 percent) and Belarus (18 percent) together hold an approximate of 40 percent of the global market of potash.

We already know about the sanctions imposed on Belarus last year, as well as the fact that they are a very close ally of Russia. Before sanctions were imposed on Russia, the global potash prices were already at a 13-year high, with prices soaring over the past 12 months.

Potash prices saw a 71 percent increase in 2021 from \$350 per ton to \$600 per ton, while it was at \$815 per ton a few weeks ago. When we look back at the global food price crisis in 2007-2008, the ease with which Russia impacted the food market is crystal clear. With Belarus, they cut down the potash production drastically to raise prices and increase profits.

Russia holds 16.5 percent of the global market in nitrogen fertiliser. While this may not sound so distressing, the fact that Russia holds close to 66 percent of the market in the production of the chemical ammonium nitrate, the key ingredient needed for the fertiliser, is alarming.

At present, Russia is under a self-imposed ban (until April) on exporting ammonium nitrate to ensure an affordable supply for its own farmers. This ban is expected to raise the price of fertiliser in the world at a time when the price of urea and diammonium phosphate (DAP), two fertilisers requiring ammonium nitrate, are already up by 90 percent and 30 percent (within the last 12 months).

When it comes to phosphorus fertiliser, Russia provides ammonia – the key ingredient in the manufacturing process – to Morocco, the largest phosphate fertiliser producer in the world with 75 percent of phosphate reserves. Morocco holds about 34 percent of the global market share in phosphorus fertiliser and another 49 percent in phosphoric acid needed for the fertiliser.

Additional monopoly

They source more than half of their ammonia from Russia, and any disruption to this supply would agitate the global market. Russia has an additional monopoly over imports of phosphate fertiliser into Europe over the past year by supplying low cadmium fertiliser, which became required under a new EU directive in 2019. This niche cannot be filled by Morocco, given that their fertiliser has higher cadmium levels than that allowed by

the EU.

The monopoly is not limited to fertiliser; it applies to food as well. Russia has also become the world's leading exporter in wheat, topping the list in 2016 and doubling its exports over the past 10 years. This has added pressure to a struggling industry in the US. Turkey supplies over 80 percent wheat import needs for the Middle East and the North Africa region at below-market prices. Yet, Turkey imports 75 percent of its wheat from Russia.

It is now obvious that any sanction on Russia has the potential to drastically influence the supply and price of fertiliser and, thus, food on the world market.

Sri Lanka

In May 2021, the Government decided to pull the plug on the import and subsidising of all synthetic chemical fertilisers in the country.

Many scientists call this an “ill-conceived national experiment in organic agriculture”, and both the Government and the advocates of sustainable agriculture have been severely criticised and insulted for trying to achieve the impossible, sparking a plethora of media discussions.

The most interesting observation that I made during this time was that everyone criticised the so-called experiment, and yet, none stepped up with a single idea/contribution to make it possible. Of course that leaves us wondering as to what the real reason could have been, behind these very loud objections to the change from synthetic-chemical-fertiliser-based agriculture to sustainable agriculture.

Did the scientists in Sri Lanka truly want to stop the country facing a famine, or did they simply want to line their pockets by becoming the mouthpieces for the national agents of international chemical giants? If it were the former, we would expect the country to be flooded with new ideas extracted from various research activities, especially from the Government research institutes that are funded by public tax money.

Yet, what we observed was that these institutions continuously funded only synthetic-chemical-fertiliser-based agricultural research, led by groups of closely-knit scientists who work collaboratively only with each other.

In fact, statistics in the past few years would show that these Government research institutions had given grants at a ratio of almost 100 to 1 (synthetic-chemical-fertiliser-based agriculture research and sustainable agriculture research). I leave you to decide what the true answer is, to that particular question.

At present, Sri Lanka spends over Rs. 70 billion per year on importing synthetic chemical fertilisers and other agricultural inputs. Over 98 percent of agriculture in the country is based purely on imported inputs and technology.

Of course, even synthetic-chemical-fertiliser-based agriculture would not have been such a problem if we used our own – locally produced –

inputs and technologies, but this is clearly not the case here.

Only 2 percent in the country practices sustainable agriculture, using local inputs and technologies. We spend another approximate Rs. 400 billion per year on importing essential food and beverages to the country. In total, we spend over Rs.470 billion on ‘food and beverages’.

Wouldn't it be cheaper in the long run to simply abandon agriculture and import adequate food to the country? Of course, in 2021 during the ‘war’ between scientists and politicians regarding the shift from synthetic-chemical-fertiliser-based agriculture to sustainable agriculture, I remember many politicians making the same statement – that they would “feed the nation by importing food” if they come to power.

Now the million dollar questions are; “where can we buy the synthetic chemical fertiliser and other agricultural inputs (raw materials and technology) needed to uphold agriculture in Sri Lanka to ensure our food security?”, and “where do we import food and beverages from?”.

When the Sri Lankan scientists and the politicians criticised the conversion of conventional synthetic chemical fertiliser based agriculture to sustainable agriculture (organic), their argument was that we would not be able to maintain the “food security” of our nation, with the loss in yield.

Food security

Now remember that our agricultural activities are 100 percent linked to the inputs through imports. If there are no imports, there is no agriculture in Sri Lanka. “Food security” is defined by the Oxford languages as “the state of having reliable access to a sufficient quantity of affordable, nutritious food”.

Mind you, it doesn't say anything about how we maintain this reliable access. If we are a developed/very rich nation having plenty of dollars, we can simply import anything and everything and stock the shelves of supermarkets, thereby giving access to food for all citizens in the country.

Is this the case for Sri Lanka? If we fail to secure agricultural inputs from the global market due to various reasons, are we able to maintain “food security” in the country? Our country is facing a financial crisis, as the experts say, but at present, even if we had foreign currency aplenty, can we purchase the necessary chemical fertilisers, pesticides, and other agricultural inputs? Are they readily available in the global market, in the wake of the sanctions imposed on Russia due to the Russian-Ukraine war?

Global food prices were already at around a 10-year high before the Russian-Ukraine war, as the coronavirus pandemic hampered shipments while heavy rains in some growing regions curtailed production.

That also translates to higher rates of hunger among the world's poorest families, who are also dealing with the economic impact of the pandemic, like Sri Lanka.

The FAO has, and is, urging other countries not to impose export restric-

tions on their own produce, stating that “they exacerbate price volatility, limit the buffer capacity of the global market, and have negative impacts over the medium term”.

And yet, a number of countries have already announced food export restrictions, while some others are considering bans to protect their domestic supplies after Russia's invasion of Ukraine.

For example; (i) Indonesia – new restrictions on the export of palm oil, (ii) Hungary – total ban on grain exports, (iii) Serbia – total ban on exports of wheat, corn, flour and cooking oil, (iv) Egypt – controls on grain exports, (v) Ukraine – total ban on exports of meat, rye, oats, buckwheat, sugar, millet and salt, and restrictions on wheat and corn, (vi) Yara (one of the largest fertiliser makers) – curtails fertiliser output to France and Italy, (vii) Bulgaria – restriction on grain exports, (viii) Pakistan – discussions underway to ban wheat exports.

Covid-19 pandemic

I believe that the second question has also been answered now. Even if we had the resources, which we are hard-pressed for, following in the wake of the Covid-19 pandemic, it would be quite difficult to find the food and beverages that were so readily available 12 - 24 months ago.

That brings us to the other side of the coin – “food sovereignty”. This is a food system in which the people who produce, distribute, and consume food also control the mechanisms and policies of food production and distribution.

If I read correctly, it is “food sovereignty” that the advocates of sustainable agriculture in Sri Lanka are striving for and not “food security” that the majority of the scientists believe in.

“Food sovereignty” emphasises ecologically appropriate production, distribution and consumption, social-economic justice and local food systems as ways to tackle hunger and poverty, and guarantee sustainable food security for all peoples, as opposed to the protection and distribution of existing food systems as defined under “food security”.

If I answer my very own question of “Will the Russian-Ukraine war trigger a famine in Sri Lanka?” the short answer would be “Yes”.

Yet, having said that, I would like to continue that if we start taking serious measures, we could still survive and come out in one piece. This must be the time that we set aside our differences as scientists, and instead come together with our various expertises to achieve a common goal – alleviating a potential famine in Sri Lanka.

As a scientist involved in environmental modelling, who believes that the health of the soils is a measure of the health of the environment and people, and that healthy soils can help mitigate many impacts due to climate change, I believe that we should support to promote sustainable agriculture in Sri Lanka.

The writer is a Senior Lecturer at the Department of Surveying and Geodesy Faculty of Geomatics
Email: ranmalee@geo.sab.ac.lk