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A Quest for Peace and Reconciliation

GLOBAL FOOD CRISIS AND FOOD JUSTICE



Pax Lumina

A Quest for Peace and Reconciliation

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'Mother and Child' by Somnath Hore on bronze

Contents

Vol. 3 | No. 5 | September 2022

Pax Lumina

A Quest for Peace and Reconciliation



EDITORIAL

06 | **Global Food Crisis and Food Justice**
Jacob Thomas

08 | **Food and Agricultural Crisis in Ukraine**
Sofiya Opatska

INTERVIEW

11 | **The Only Palpable Thing is Destruction**
Vitaliy Osmolovskyy

15 | **Lebanon's Economic Collapse and Need for Food Justice**
Siham Rizkallah

20 | **Poverty and Food Crisis An African View**
Emmanuel Forro

23 | **Food Crisis in Brazil**
Paul Schweitzer

25 | **Rampant Poverty Amidst A Crippled Sri Lankan Economy**
Jude Deluxion



INTERVIEW

27 | **Fight Against Food Racism and Food Fascism**
Vandana Shiva

38 | **Food Security in India**
Sanoop M.S.

41 | **Global Food Crisis The UN Perspective**
Teresa Kotturan

SCIENCE AND PEACE

46 | **Meet the New Meat**
Brian Brozovic and Ted Peters

52 | **Cultivated Meat An Indian Response**
Sreekala Nair

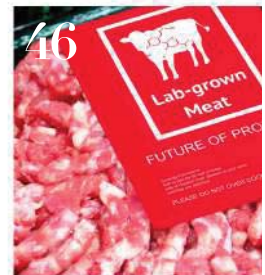
ART AND PEACE

54 | **Discomforting Delineations**
M. Ramachandran

BOOK REVIEW

56 | **The Devastating Impact of Global Hunger**
Neena Josphe

LETTERS TO THE EDITOR





Global Food Crisis *and* Food Justice

Editorial

The world food crisis has not come upon us suddenly. Of course, the Ukraine War precipitated matters. What has been a conflict between Russia and Ukraine has got amplified by the supply bottlenecks faced especially in the corn and cereal supplies to the rest of the world.

It is strange to observe that when thousands of people, soldiers, their families, and children died, the world was not as worried as it is now when the prospects of hunger loomed large before the world with imminent disruption of grain supplies to the rest of the world.

In this issue of Pax Lumina, there is an article on the agricultural situation in Ukraine and how the disruption of the supplies will affect many countries which depend on Ukraine supplies. Rather poignantly empathetic considering the death toll and suffering of Ukraine itself! This tragedy has been endlessly unfolding, with no end in sight. So why do we still write about this? Well, this is an existential question for Pax Lumina. To forget or not. If one remembers at least some strands of the pain experienced by our fellow men, women and children, this will remain in our memory.

But it is not only Ukraine that is bleeding. There are countries in other parts of the globe where similar situations of war and violence make it unbearable to the people. Some of the authors have indicated such places in other parts of the world. But the story remains equally grim. The red-hot question is how to lift oneself by the bootstraps and keep moving rather than endlessly commiserating. And this is a question that has to be pondered upon by not only Russians and Ukrainians but also by everyone on this planet. May be we will see such a day emerge from the dark.

But the real question before each one of us watching this violence is: what can we do to minimise the impact of violence? If we all try, there will be a change, for sure.

Jacob Thomas

Editor



THERE'S ENOUGH ON THIS PLANET
FOR EVERYONE'S NEED,
BUT NOT FOR EVERYONE'S GREED.

Mahatma Gandhi





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FOOD AND AGRICULTURAL CRISIS IN UKRAINE



On August 30, as I write this article, the news has just been published that the first ship, with Ukrainian agricultural products, which was chartered by the UN World Food Programme, arrived in Djibouti with 23,000 tonnes of wheat on board. After unloading, wheat will be delivered to consumers in Ethiopia.

As part of the initiative, 44 ships left Ukrainian ports and exported more than 1 million tonnes of agricultural products to 15 countries around the world last month.

I never gave much thought to Ukrainian agriculture. As an economist by education, I always knew that it was a big and important part of our economy. As a Ukrainian by heritage, I always knew how fertile our land was. Fascists were taking black land from Ukraine to Germany. The Soviets created an artificial famine in 1932-33. Millions of Ukrainians died, though it was the best harvest in decades.

As a result, Ukrainians are very careful about bread and about not finishing the food on the plate. From my childhood, I was taught by my grandparents that when bread falls from the table, after we pick it up, we should kiss it. To throw bread out is like a sin to Ukrainians. Grains have a special place during Christmas and any big holiday.

In the last six months, I have talked a lot about our agriculture. Because it is crucial not only for Ukraine but also for many other countries. In March-April, 2022 many Ukrainians realised that we are the world's largest exporter of sunflower seeds oil, No. 3 in corn, No. 4 in walnuts, No. 5 in honey, No. 6 in wheat and pigs, No. 7 in oats and poultry meat, No. 8 in whole milk powder and No. 9 in cattle. These numbers were a surprise for many Ukrainians. The war which Russia escalated on February 24 in Ukraine made us fight another battle - how to deliver goods that are stuck in Ukrainian ports and are mined by Russians.

In the third week of the war, President Volodymyr Zelenskyy, in one of his evening messages, said that all Ukrainians are volunteering and supporting our army. It is extremely important to save Ukraine when no one believes in us. But we should not forget that we have to think about the long-term future and what any of us can do best for victory. Already in spring, we have to think about winter and how we can grow and harvest our land. The goods will not only be consumed by Ukrainians but also by people in many countries.

One of our University Board members, a woman, has a family business in agriculture. Their family has not only developed their business but also their communities and villages. They provided education and built roads which are at the heart of their business. On March 29 in a Facebook post, she said, "We have started. God help us!" She added a picture of a tractor on their land. The post went viral. There has

Occupation forces are shelling fields in the Kherson, Zaporizhzhia, Dnipropetrovsk, and Mykolaiv regions. Farmers and local authorities in the frontline areas see first-hand the loss of crops. **Fields are burned by rocket fire, artillery, the detonation of mines or military equipment.**





been no year when Ukrainians appreciated people working on the land like this year. The clarity came to so many.

However, war is devastating, not only to infrastructure and cities but also to land. In July, Ukraine lost most of the grain due to fires: 317,000 tonnes. These are catastrophic losses. About 22 percent of all Ukrainian agricultural land is currently occupied by Russians, according to NASA Harvest satellite data.

In July, the front line stretched for more than 1,000 km. Occupation forces are shelling fields in the Kherson, Zaporizhzhia, Dnipropetrovsk, and Mykolaiv regions. Farmers and local authorities in the frontline areas see first-hand the loss of crops. Fields are burned by rocket fire, artillery, the detonation of mines or military equipment.

Collecting data throughout Ukraine on the status of agriculture is a non-trivial task. Not everywhere do local authorities have the opportunity to estimate the total area of lost agricultural land. The latest study by the Kyiv School of Economics Institute, jointly with the Ministry of Agrarian Policy and Food of Ukraine, says that as of June, direct losses in the agricultural sector amounted to \$4.3 billion, and indirect losses, to \$23.3 billion.

In July, 2022, almost the entire front-line zone in the south burned. It was primarily grain fields. In total, about 70,000 hectares of cereals (wheat and barley) were destroyed in a month. July was the first month of such large-scale fires. In contrast to the previous months, it was in July that the already ripe crop, ready to be

harvested, would burn incredibly quickly from the impact of rocket fragments or artillery fire.

Those who grow grain have suffered the greatest losses. Firstly, because it is the largest sector in terms of the number of manufacturers. Secondly, they were affected by a significant increase in the price of logistics. At its peak, logistics cost more than the grain itself.

Life is not easy in Ukraine now. Life is not safe. The life of many people in the world depends on how Ukrainians stand now. If we had not been resolute in February and March, it is a question of where Russian President Vladimir Putin and his army would have been by now and what our European neighbours would be doing now.

If we did not remember that this was not just about Ukraine, we would not be so strong. It is mind-blowing that in 2022 the basic right of people for life and human dignity is questioned now in Ukraine and the whole world is in a kind of reality show.

But it is also such a pity that food is being used as a major card in blackmailing by the terrorist State. Ukrainians feel huge responsibility now and rely on support and help from all parts of the world. With the help of God, right will prevail.

Otherwise, what do we leave to our children...

Dr. Sofiya is Vice-Rector for Strategic Development, Ukrainian Catholic University.



■ INTERVIEW

Vitaliy Osmolovskyy / Pax Lumina

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The Only Palpable Thing is DESTRUCTION

Vitaliy Osmolovskyy is a Ukrainian.
At present, he is doing voluntary service
for the Ukrainian refugees in Poland.





The war in Ukraine has very serious consequences for the whole world. This is due to the substitution of the concepts of morality, the destruction of democracy, the severe violations of human rights, and the lack of respect for international organisations, which play a huge role in decision-making.

? The world is going through a food crisis for various reasons like war. Could you kindly highlight the reality of Ukraine now?

The reality of Ukraine now is an ugly one. Its ugliness lies in the fact that in the 21st century a perfidious war is happening in the very centre of Europe. Ukraine only wants to live independently in its sovereignty and independence. This was received on August 24, 1991, by the act of declaration of independence. However, Russia does not want to accept the full independence of Ukraine. Therefore, they unleashed a bloody war by annexing the Eastern parts and the Crimean Peninsula in 2014. After that, Russia waged a hybrid war for eight years. On February 24, 2022, they launched an open attack. Russia, an Orthodox country, attacks another Orthodox country, replacing the concepts of Christianity, love for God, and neighbour (Matthew 22:37-40).

Vitaliy Osmolovskyy

? How has the Ukraine war affected the world, especially the global food crisis?

The war in Ukraine has very serious consequences for the whole world. This is due to the substitution of the concepts of morality, the destruction of democracy, the severe violations of human rights, and the lack of respect for international organisations, which play a huge role in decision-making.

Also, this war is already having a huge effect on the global food crisis. The UN World Food Programme made a loud statement - 44 million people around the world are in danger of starvation. All because of problems with the delivery of Ukrainian grain, blocked by Russia in the Black Sea port after the start of the invasion.

Ukraine provided a total of a little more than 50 million tonnes of grain for export last year. Out of these, China received 12 million tonnes. As a rule, 30 percent of all products



are delivered to the countries of the European Union, 30 percent to North Africa, and another 30 percent to Asia.

Until February 24, Ukraine was at record levels, exporting 43 million tonnes. Our export expectations were at the level of 70 million tonnes for this year, that is, from June, 2021 to July 1, 2022. Unfortunately, all these projections have changed since the war started.

? Are the people of Ukraine, especially the victims of the war and the refugees, given proper shelter and food?

Thanks to volunteers, Western partners, religious organisations, governments of many countries, and people of goodwill, the victims and the refugees have been given proper shelter and food. This does not mean that all the needs are satisfied. Unfortunately, they are only growing. There are new trials and challenges with the provision of decent housing, professional medical facilities, psychological assistance, educational activities, support for various types of refugees, and sometimes just being with people.

? Could the government do anything in this regard?
• How about the neighbouring countries' concern about providing food and security for the people of Ukraine?

The government is doing everything possible and impossible in this matter. Special credit has to be given to President Volodymyr Zelensky, who holds daily meetings with representatives of the different structures. I want to give special thanks to the neighbouring country of Poland. It has hosted five million refugees.

Poland was the first country to recognise the independence of Ukraine in 1991. This country, which did not exist for 123 years, appreciates what independence is. An equally important role is played by the Baltic countries of Latvia, Lithuania, and Estonia. Geographically, these are small countries, but their heart, desire, and support are huge. It's better not to mess with them.

? How do voluntary non-governmental groups and social workers function at this crucial time?

Each organisation has its organised structures through which it works. Also, social workers come from all over the world and help as much as they can. This assistance was provided at State borders, railway stations, and distribution centres. Someone bought and distributed things, and someone cooked food and brought it to the stations for the refugees. I also want to note that despite such a huge number of refugees in Poland, all of them were received by families, parishes, and institutions without organising any refugee camps. Representatives of many international structures are always surprised how this could have been possible.

? Could you share your experience of serving the people affected?
• What are the activities you are engaged in currently?

The team, 'Jesuits for Ukraine', was created at the beginning of the war to coordinate efforts to deliver aid to Ukraine from the Polish provinces of the Society of Jesus. The priority is to deliver aid. We have financially supported works run by Jesuits: a refugee house in Ukraine and Poland.



Social workers come from all over the world and help as much as they can. This assistance was provided at State borders, railway stations, and distribution centres. Someone bought and distributed things, and someone cooked food and brought it to the stations for the refugees.



We have a huge challenge ahead of us to create good living conditions for millions of refugees. Part of them have already found lodging in Jesuit parishes and houses. A few projects are underway in Polish provinces to support them. We are beginning a long-lasting process, in which refugees will be able to find work, accommodation and integrate. At the same time, we still expect more newcomers, so we continue our efforts to send aid to Ukraine.

Our work comes with many challenges. For example, the evangelist says God is love, although in such moments it is hard to see it and the only palpable thing is destruction. Love is the most sacred thing in a person and the world is under attack itself as the chance for life is snatched away.

I think that for a person of faith when love disappears God also disappears. Therefore, one of our tasks (as Jesuits) is to support and find in every person, without exception, the light of hope, the light of Easter, and the light of peace. It is very difficult and certainly, there is no desire when anger overwhelms us. It is extremely hard when your neighbour wants to behead love, strength, and freedom.

? Are there any initiatives taken by the people or groups to address the current crisis?

From the very beginning of our work/mission, as well as representatives of the Ukrainian government, various initiatives have been taken to overcome this war. A lot depends on the dynamics on the battlefield, that is, how many people must leave Ukraine and seek refuge outside the country. We are also doing our best to show the objective truth of this war.

? Is the present crisis in Ukraine just political?

War is not only politics but there are also many other contexts. For example, geopolitical influence in the region, the seizure of resources, dominance over another, an ideology that is aimed at exterminating an entire nation, personal interests, and complexes of a party that attacks another sovereign and independent State.

? What can the rest of the world do to establish peace in Ukraine?

First, a clear position and action against the country that is the aggressor and terrorist, which, in this case, is Russia. There is no need to be afraid of Russia. On the contrary, there is a need to stop playing along in every possible way for some personal material interests and ask yourselves the question of what the price of innocent victims is. Whether all the values on which civilisations, societies, and values are built make sense.

? Anything else you would like to highlight?

First, I want to thank all those who help Ukraine and give all kinds of support. Thanks also to all of those who are not afraid to stand in the light of the truth (you will know the truth, and the truth will set you free) and are ready to uphold human values to the end.

Vitaliy Osmolovskyy is a Ukrainian Jesuit volunteer currently engaged in relief works in Poland for the victims of war.



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LEBANON'S ECONOMIC COLLAPSE AND NEED FOR FOOD JUSTICE





Lebanon is facing one of the most severe socio-economic collapses. This has led to dramatic food insecurity for both the citizens and thousands of refugees living in Lebanon.

Lebanon was already suffering from the economic recession compounded by the COVID-19 pandemic, when a devastating blast hit the capital Tripoli's port on August 4, 2020. The war in Ukraine increased inflationary pressures. It was reflected in many economic indicators showing the gravity of the multidimensional crisis on food and living security.

Since October, 2019 Lebanon is facing a severe economic collapse including a currency crisis with a severe depreciation of the local currency against the US dollar and continuous inflation, a fiscal crisis with one of the highest levels of public indebtedness worldwide leading to a payment default in March, 2020. There is also a banking crisis with the impossibility of withdrawals and transfers in foreign currency from local deposits.

However, the collapse started in 2011 and completely reversed the situation for all of the economic indicators.

The sharp depreciation of the Lebanese pound against the US dollar in a country that imports nearly 80 percent of its consumption causes **serious social disparities and severe injustice in access to food and basic needs.**

The three main pillars of this collapse:^[1]

- 1) The involvement of the banking system in the financing of the public sector.
- 2) The ratchet effect of dollarisation since the currency crisis of the 1980s.
- 3) The maintenance of the unconventional exchange rate, the peg to one currency adopted in 1997 despite an accumulation of balance of payments deficits since 2011.

As long as the balance of payments continued to have an upward trajectory, the growth gap between foreign currency deposits and external assets of the banking system remained measured (Kasparian, 2020).^[2] Since 2011, the acceleration of the balance of payments cumulative deficits makes the banks' foreign assets not sufficient to meet customers' deposit withdrawal requests.

The year 2011 was also a turning point for the economy with the government resigning and the loss of political stability. Then there was the outbreak of war in Syria and the influx of hundreds of thousands of Syrian refugees.

Lebanon has the world's highest per capita refugee presence, estimated at 25 percent of the overall population. After that, Lebanon started having an increase in the premium risks which contributed year after year to the downgrading of the Lebanon Eurobonds by the international rating agencies (Fitch, Moody's, S&P)

Since then, the failure in implementing the needed political and macroeconomic reforms has led to what the World Bank has called one of the top three most severe economic crises globally since the 19th century.



Several initiatives have been undertaken to strengthen food security in Lebanon. One of these initiatives is the project between **the International Labour Organisation (ILO) and the Food and Agriculture Organization (FAO) in Lebanon with the Ministry of Agriculture, to provide selected farmers with vouchers for agricultural inputs, to support small-scale farmers to meet their basic agricultural needs.**



The impact on food security

The sharp depreciation of the Lebanese pound against the US dollar in a country that imports nearly 80 percent of its consumption causes serious social disparities and severe injustice in access to food and basic needs. Residents in Lebanon (Lebanese and refugees) are now classified into three categories:

- A category whose purchasing power decreases every day since its income is exclusively in Lebanese pounds which loses its value continuously.
- A category whose purchasing power is maintained since part of its income is in foreign currency (due to dollarisation in different sectors)

- A category whose purchasing power increases since all of its income is in foreign currencies (the inflation rate is still lower than the depreciation rate).

The World Food Programme (WFP) estimated the number of Syrian refugees who are severely or moderately food insecure at 1.3 million, of whom 1.2 million are receiving assistance.

The WFP brief report of 2022 for Lebanon shows that 46 percent of Lebanese households are food insecure and 88 percent of Syrian refugees in Lebanon are extremely poor.^[3]

Between October 2019 and April 2022, the national currency, the Lebanese Pound (LBP), lost more than 90 percent of its value. The price of the basic food basket monitored by





the WFP recorded an eleven-fold increase. The annual inflation rate overall for 2021 was 201 percent, the highest of all countries tracked by Bloomberg.

In addition to the majority of the Syrian refugees, over 2.5 million people, including 2.2 million Lebanese, 208,000 Palestinians, and 78,000 other refugees need humanitarian aid in Lebanon, according to the latest UN statistics.

Main initiatives to help Lebanon

Recently, the World Bank has approved the granting of a \$150 million loan at a subsidised rate, to continue stabilising the price of bread in the coming months. The latter has until now benefited from subsidies granted via the foreign currency reserves of the Central Bank which couldn't pursue this measure because of funds depletion.

If the bread subsidies are lifted, public authorities fear a destabilisation of the security situation already strongly impacted by the economic crisis which has led to more than 82 percent to live below the poverty line. The minimum wage is now equivalent to less than \$30 compared to \$450 barely three years ago.

At the same time, according to the United Nations Environment Programme (UNEP) and the World Resources Institute, Lebanon occupies third place in the Arab region in terms

of food waste (105 kilos per person per year), after Bahrain (123 kilos) and Iraq (120 kilos), reflecting a remarkable food injustice.

Food justice[4] (the right to good food for all) represents 'a transformation of the current food system, including but not limited to eliminating disparities and inequities' (Gottlieb and Joshi, 2010).^[5]

Food injustice is not only related to the lack of food because of inflation and depreciation (especially since 80 percent of consumption is imported and paid in foreign currencies), but also it is linked to food loss and food waste.

According to the Food and Agriculture Organisation of the United Nations (FAO), food loss is the decrease in the mass of edible food during production, post-harvest and processing, while food waste is observed at the retailer and consumer level.

In October 2021, The Economic and Social Commission for Western Asia organised a series of Social Justice Policy Dialogues that considered the link between social justice and the prevailing socio-economic issues in the Arab region. One of the main results was to link food security to social justice outcomes by looking at the main challenges faced by vulnerable groups in accessing food and the type of support they would need to enhance their resilience to food access.

The radical solution remains in implementing economic reforms essential to reviving the economy so that we can leave the circle of assistance and **resume the path of growth to be able to satisfy its needs.**



In this context, several initiatives have been undertaken to strengthen food security in Lebanon. One of these initiatives is the project between the International Labour Organisation (ILO) and the FAO in Lebanon with the Ministry of Agriculture, to provide selected farmers with vouchers for agricultural inputs, to support small-scale farmers to meet their basic agricultural needs. The agricultural sector offers livelihood opportunities for both the Lebanese and Syrian refugees.

To support the most vulnerable segments of the population, the European Union has allocated an additional €22 million in humanitarian aid to respond to rising food insecurity exacerbated by Russia's war in Ukraine.

To conclude, we can say that the collapse of the Lebanese economy has been the main cause of food insecurity in the country, although several additional factors have aggravated the magnitude of the crisis. Currently, local and international initiatives are certainly promising to ensure the necessary minimum of food security. However, the radical solution remains in implementing economic reforms essential to reviving the economy so that we can leave the circle of assistance and resume the path of growth to be able to satisfy its needs.

Dr. Siham Rizkallah belongs to Faculty of Economic Sciences, University of Saint Joseph, Beirut, Lebanon.

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POVERTY AND FOOD CRISIS

An **AFRICAN** View



The question of poverty in Africa is so political that its key content and statistics always provoke thoughts, comments and contradictions. Potentially, there is no doubt that the continent as large as 30 million km² is rich in minerals (40 percent of the world's reserves in gold), arable land (60 percent of the world's unexploited spaces), good weather and suitable agricultural conditions in large sections of many countries.

The main area of poverty is political organisation and strategy. One important point to keep in mind with any analysis any expert makes is the diversity within the same situation. It varies from one region to another, from one country to the next.

South Africa is significantly different from Nigeria even though these two countries stand at the head of all countries in terms of GDP. Poverty in South Africa is mostly racial, while in Nigeria, it is mostly urban, with some regional differences as well. Post-Mugabe Zimbabwe is a different story of the struggle for the restoration of hope by and for Zimbabweans together with their immigrants.



The main area of poverty is political organisation and strategy. **One important point to keep in mind with any analysis any expert makes is the diversity within the same situation. It varies from one region to another, from one country to the next.**

After saying this, poverty, like other indicators of well-being, fulfilment or human flourishing is relative. In his inaugural address, in Addis Ababa, on February 5, 2022, the newly-elected President of the African Union and President of the Republic of Senegal Macky Sall reviewed some of the most crucial issues facing the continent, from health to self-sustenance and development.

Despite limitations, the joint response to Covid-19 has been perceived as a success. One of the impacts of this pandemic is the rediscovery of traditional medical wisdom and the curative virtue of local plants. Must we wait for calamities to discover endemic forms of strategic progress in other areas?

As a West African, and specifically a citizen of Burkina Faso, I tend to stress more the 'anthropological poverty' which I define as the crisis of togetherness. The human being is profoundly a social being. A good community is therefore a constitutive part of personal life. The insufficiency of solidarity between nations and peoples, coupled with the organisational weaknesses of our states represents 'real poverty' in my view.

In Burkina Faso, as an example, Covid-19 did not deter agricultural producers as much as terrorism did from holding to the demands of their sector. Although, I am no political scientist nor a security expert, the visible military poverty of my country against this terrorism has taken tens of hundreds of lives, displaced thousands, and is still preventing peasants from growing crops in some of their occupied areas.

Without a public strategy, the Mediterranean Sea will have more Africans to kill, if those youth therein affected find the means to get



More than any other illness, the failure to build global solidarities is the most crucial issue. I cannot agree enough with Pope Francis **when he kept exhorting the world on the 'globalisation of indifference', in the wake of Covid-19. What I mean is also that this solidarity must start among Africans themselves.**



there at all. If not, poverty will clothe itself in increased general insecurity.

Regarding the specific food crisis of 2022 and with the awareness that 12 percent of the African imports of wheat are from Ukraine, Somalia, Tunisia and Libya, we cannot affirm the same relativity.

Food is part of a human basic need. Its shortage is therefore a matter of life or death. Some other African countries import grain from Russia for up to 32 percent of their total imports of this product. There is also corn and oil that our countries import from Ukraine.

President Macky Sall of Senegal met President Vladimir Putin on June 2 in Sochi to discuss the freeing of a corridor at Odessa for transportation of food stock and agricultural inputs like fertilisers, to avoid starvation of large populations on the continent. In West Africa, equally affected by food insecurity, we have already mentioned the general insecurity in those countries occupied by terrorist groups. The Food Security and Nutrition Work Group identified a population of 28 million affected by the current food crisis in that area.

The Ukrainian food ship set sail on August 16, from the Pivdennyi port, and arrived in Djibouti (East Africa) on August 30, with 23,000 tonnes of cereals destined to Somalia, Ethiopia and Kenya, where an estimated 22 million were in danger of starvation. Since population is one of Africa's riches, the food crisis is a threat to integrity.

More than any other illness, the failure to build global solidarities is the most crucial issue. I cannot agree enough with Pope Francis when he kept exhorting the world on the 'globalisation of indifference', in the wake of Covid-19. What I mean is also that this solidarity must start among Africans themselves.

The G5 Sahel (an institutional framework for regional cooperation in development policies and security matters among Burkina Faso, Chad, Mali, Mauritania, and Niger) may wait another 50 years to get \$1.5 billion from the world's nations to deploy a combined security force over their territory while Ukraine could get more than 20 times the same amount within a month (all things considered).

But what can Africans do to squelch the remotely-designed and internally bought-in plight of terrorism? What can Africans do to become actors of their progress when other powers tend to reduce them to mere consumers of the world's goods and mere disciples in global progress?

We have had several wake-up calls, but the slumber seems deep.

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FOOD CRISIS IN BRAZIL

Brazil is currently facing an epidemic more dangerous than the corona virus. It is hunger. Once hailed globally for its success in combating hunger, the country is facing a serious food crisis. After the economic boom of the 2000s and the implementation of social policies geared towards the poor, Brazil thought it was free from this chronic problem. But after the economic breakdown, especially during Covid, tens of millions of Brazilians are haunted by the spectre of hunger every day. Roughly, 36 percent do not have money to eat three meals a day. Ironically, hunger is

not linked to war or crisis. It is the result of acute wealth concentration and inaction from the state.

The everyday diet comprises rice, beans, meat and vegetables. Unfortunately, today, the majority of families are left with one or two items on the plate, with some surviving just on rice. This shocking situation was revealed in a survey held in 2021 by the Food for Justice Research Group, which places the number of people with food insecurity at 125.6 million or 59.3 percent of the population.

These programmes have not dealt with long-range problems, but instead, they tend to make long-range problems worse. **The deep corruption removes an enormous part of the money available. The current congress approved a constitutional amendment to permit the secret use of government funds, without proper accounting!**



According to a recent study by the Brazilian Research Network on Food and Nutrition Sovereignty and Security, in less than two years, the number of people facing hunger in Brazil has almost doubled. There were 19.1 million in this situation at the end of 2020. Today, there are 33.1 million, which is 15.5 percent of the population. As per the research, almost 60 percent of families live with some degree of food insecurity. The problem is more serious among families led by black women and rural residents. The researchers warn that the number of people going hungry is similar to that of 30 years ago.

Unfortunately, Brazil has had a succession of populist governments that speak well when the election is near, but do not do much otherwise. Former president Luiz Inácio Lula da Silva had unified various existing programmes helping the poor, calling it 'Bolsa Família' (family grant) but falsely saying it was new. He did expand it to more families.

Our current president, Jair Bolsonaro, ended this programme and started a new one, called 'Bolsa Brasil' (Brazil grant), but in the transition, many families were left without support, and even now, there are a million poor families not included. These programmes have not dealt with long-range problems, but instead, they tend to make long-range problems worse. The deep corruption removes an enormous part of the money available. The current congress approved a constitutional amendment to permit the secret use of government funds, without proper accounting!

The value of this money now is well over a billion dollars. Education, healthcare and other basic needs are under-financed.

We have an election for President, Congress, and other offices on October 2, 2022, with a runoff a few weeks later. Bolsonaro and Lula are the front-runners, and other candidates with more realistic programmes have not advanced significantly since the official campaign started on August 16.

Given the gravity of the problem, the issue of food security has become an important topic, even amid high inflation and acute fears about the future of Brazil's democracy. Lula repeatedly highlighted his successes as President in reducing hunger and has prioritised the food crisis in his campaign platform.

On the other hand, Bolsonaro pushes his cash transfer programme that offers larger payments to the poor despite worries about Brazil's growing debt. This reflects the political salience of hunger. Come what may, the next government will have to prioritise and implement strategic plans to address and overcome the grave issue of hunger in Brazil.

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RAMPANT POVERTY AMIDST A CRIPPLED SRI LANKAN ECONOMY

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Sri Lanka is facing a massive economic setback.

This is due to a series of events such as the Easter bombings, the corona crisis, and political instability. The daily life of a large number of people has been greatly affected by this massive economic downturn. The daily-wage labourers are being exploited. The middle man seems to be making use of all the opportunities to get profits from the unstable economy.

Most of the time, I have returned to my house without buying half of the things because of soaring inflation. A loaf of sliced bread costs Rs 390-450. The persistent rise in the prices of essential food commodities has led to a sharp rise in the number of undernourished people. Low-income families are less likely to eat three meals a day.

Indika, a 34-year-old, cried and said, “I worked three days in a field cutting pits to plant coconut trees, and I was paid only Rs 150. I used to dig a pit for Rs 350 since it was a rocky ground but this time I was paid only Rs 50. The landowner said, he did not have the money to pay me.”

Indika, who lives in Kurunegala, used to provide three meals a day for his three children. Now they get only one. His wife is also a day-wage labourer. But the soaring cost of essential items, particularly food, means they are struggling to make both ends meet.

Over the past four months, the price of a standard cooking gas cylinder has shot up from Rs 3500 to Rs 5000. This is an increase of 85 percent. This had a huge impact on the middle class who depends on gas in the cities.

This nation of 22 million people is facing an unprecedented economic crisis. Its foreign

Many poor parents are unable to pay the transport fees to send their children to school. **The prices of stationery, school bags, and books are much higher than in the past.**



school bags, and books are much higher than in the past.

Entrepreneurs who earned a decent income by selling handmade goods like brooms, bags, rags, and fibre products have stopped selling. The price of raw materials is so high that they are priced out of the local and international markets. Many Sri Lankans buy cheaper products online from other Asian countries.

The middle class continues to face hardships due to an increase in water and telephone charges and tax increases. Most of them are teachers, clerks and office assistants. Their salary has not increased, but the prices of goods have increased. So, they find it difficult to manage.



exchange reserves had dropped so precipitously that it was not able to pay for essential imports.

As a result, the government has been forced to restrict the import of several essential commodities, including food items, in a desperate bid to hang on to its dollar reserves. This move, combined with increasing fuel and freight costs, has pushed the price of essentials such as milk powder and rice much higher.

This situation also plays a big role in the academic decline of students. Many poor parents are unable to pay the transport fees to send their children to school. The prices of stationery,

Many have taken motorbikes and refrigerators on lease. It has become difficult for them to pay the lease money.

The only relief and hope for the people is the presence of religious organisations and NGOs, which are providing the much-needed necessities and medical facilities.

Jude Deluxion is the Sri Lankan Jesuit Province Development Director.



■ INTERVIEW

Vandana Shiva / Pax Lumina

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FIGHT AGAINST FOOD RACISM and FOOD FASCISM

Dr. Vandana Shiva is a scholarly author, environmental activist, food sovereignty advocate, and ecofeminist. She is based in Delhi, India. She has been working towards defending human rights and developing the agricultural sector with special focus on organic farming.





The current price crisis and incoming hunger crisis are also not a symptom of the Russian invasion of Ukraine, but a symptom of a system that has gone too far. According to the Food and Agriculture Organisation, the World Bank, and the International Panel of Experts on Sustainable Food Systems, there is currently no risk of global food supply shortages.



? With food production already falling and fuel prices rising, the market is very volatile and the threat of hunger is greater. Are we Indians on the verge of a food crisis?

India has a strong food security policy because we suffered under British rule. The Great Bengal famine of 1943, which killed two million people, despite adequate rice production was the trigger for the Quit India Movement. Preventing the build-up of stocks for speculative trade was the basis of our Essential Commodities Act (ECA).

Since the 1991 World Bank structural adjustment, there have been attempts to dismantle the Agricultural Produce Market Committee Act which regulates farm prices, and the ECA which regulates prices of essential commodities. The farmers' movement of 2020-21 prevented the deregulation which would have created conditions for a predictable food crisis. We need to defend our Constitutional Laws that protect our farmers and our farmlands to prevent future crisis

? Food markets have been volatile since the Ukraine-Russia conflict, including problems such as food shortages, food inflation and hoarding. Yet, many argue that financial speculation is also the cause of the crisis. What is your opinion?

The current price crisis and incoming hunger crisis are also not a symptom of the Russian invasion of Ukraine, but a symptom of a system that has gone too far. According to the Food and Agriculture Organisation, the World Bank, and the International Panel of Experts on Sustainable Food Systems, there is currently no risk of global food supply shortages.

Since food has been reduced to a financial asset and commodity, excess speculation due to food financialisation is behind the crisis. This means steep price increases for the consumer and bigger corporate gains for financial players and big agricultural firms. What is crucially being overlooked by most diagnoses of the current food crisis is how the problem does not lie in a lack of supply, but instead in how the food system is structured around power.

? The general impression is that some political parties, backed by the industrial lobby, are trying to use the war to their advantage. For example, many are pushing for the deregulation of new Genetically Modified Organisms (GMOs) in Europe as a solution to the food crisis. Does this equation work?

GMOs do not increase yields. They increase the yields of toxins. They have failed to control pests and disease and have instead created super pests, threatening food security. Using disasters and wars to push GMOs has been the strategy of the Poison Cartel. They tried it during the Orissa super cyclone in 1999, and we prevented the dumping of GMOs. They tried it in Haiti after the earthquake in 2021. They are trying to deregulate GMOs in Europe using the Ukraine conflict and are attempting to roll back the Farm to Fork policy based on biodiversity and bio-districts.

Food is too important to be left in the hands of corporations and the politicians they corrupt. Food democracy demands that citizens stay vigilant to defend their rights and limit the power of corporations.

? Even as India gets richer, we have become the capital of hunger and malnutrition. There are 'alarming' levels of hunger in some States. What is the reason for this widespread malnutrition? How can we tackle the problem of hunger?

Growth in money in the hands of a few is not societal richness. Extractive growth based on

the destruction of nature and corporatisation of the land creates poverty. Wealth does not mean money. Indicators of 'growth' based on GDP show how the market and profits grew. It does not measure how nature was destroyed and farmers were pushed into debt and poverty. We need new indicators of well-being. In Navdanya [an NGO that promotes biodiversity], we have created the indicator of health per acre, which intensifies biodiversity, and grows more nutrition per acre. Regenerating the earth by regenerating biodiversity is the answer to solving the crisis of hunger and malnutrition while defending the right to food.

? The world population is estimated to peak at nearly 10 billion by 2060. The earth is already struggling to keep us all alive. Almost all arable land is cultivated. In addition, climate change is affecting the production of staple crops. Do you think that traditional or organic farming methods alone can match the increased demand for food?

The Green Revolution and Industrial Agriculture are energy, resource and capital-intensive. They are the major cause of climate change, biodiversity erosion, malnutrition and hunger. Industrial food systems based on fossil fuels and chemicals are less than a century old. In a few decades, industrial food systems have destroyed the earth's systems, human health and livelihoods as they have directly violated the ecological laws and laws of justice.

Karnataka Raita Sangha President MD Nanjunda Swamy, Farmers Leader Mahendra Singh Tikait, Seed Geneticist Dr Vandana Shiva, Social Activist Medha Patkar and others at Farmers meet in Bangal





Food is too important to be left in the hands of corporations and the politicians they corrupt. Food democracy demands that citizens stay vigilant to defend their rights and limit the power of corporations.

Industrial systems are based on:

- Monocultures instead of diversity.
- Careless technologies of spraying poisons to kill insects, plants, and fungi.
- Inefficient use of the blessings of sunlight, reducing photosynthetic biomass and creating negative productivity with external inputs.
- Extracting fossil fuels and soil fertility.
- Separation of plants from animals.

The anti-ecological industrial food systems have contributed to:

- 50 percent of the greenhouse gases, by polluting the atmosphere and destabilising the climate system.
- 75 percent of the desertification and destruction of soil.
- 70 percent of freshwater use.
- 75 percent of plant genetic diversity loss in one century.

The anti-ecological response is to put the industrial food system on steroids. To destroy real farms, real farmers, real food and force hyper-industrial monoculture farms, run on robots and AI, to produce raw materials of carbohydrates, proteins and amino acids for lab-based industrial fake food systems. This is the dystopia of 'farming without farmers' and 'food without farms' that the rich polluters who have contributed most to climate change are imposing undemocratically on the world as a false totalitarian solution to climate change.

? Some suggest that technology is there to make things better for farmers, while others argue the opposite. How do you look at the scope of an intermediate technology balancing tradition and modernity?

Technology is a tool. Tools help us transform nature's gifts to meet basic needs. The fewer resources and energy technology uses, the more ecologically and socially efficient it is. The more it extracts from the earth without giving back, the more ecologically and socially destructive it is.

Looking at technology fragments is deceptive. Making synthetic fertilisers by the same sophisticated technological processes that used fossil fuels to make explosives is impressive if we just look at the technology of the Haber Bosch process. But when we assess the impact of synthetic fertilisers on the atmosphere, soil and water, the picture changes.





Bija Satyagraha Rally, Bangalore

Nitrogen fertilisers emit N₂O, a greenhouse gas, which is three times more damaging to the atmosphere than carbon dioxide. Chemical fertilisers increase water demand 10 times leading to a water crisis. The pollution from nitrogen fertilisers is killing water bodies and leading to dead zones in the oceans. Chemical fertilisers kill organisms and destroy the living soil, leading to desertification. This undermines food security. Technologies need to be assessed from a systems perspective. Tradition and modernity are artificial constructs. Ecological agriculture is both traditional and modern.

? There is an international consensus on the need to create
 ● **an alternative to industrial agriculture and the retail model.**
Can agroecology contribute to the protection of biodiversity and the well-being of farmers and citizens?

Yes, agroecology which means ecological agriculture is the answer to the multiple crises we face. It is time to abandon our resource-intensive and profit-based economic systems that have created havoc in the world, disrupting the planet's ecosystems and undermining society's systems of health, justice, and democracy. The shift from fossil fuel-driven corporate globalisation to the localisation of our economies has become an ecological and social imperative.

We must put into practice the international consensus on the need to create an alternative to industrial agriculture and the large-scale distribution model. The creation of local ecological economies based on 'bread labour' and co-creativity with nature is the only way to

sustain the earth and human societies through the rejuvenation of real work.

The ethical, ecological response is to return to earth and her ecological laws to ensure food for all, health for all, and work for all.

? You have taken on global corporations like Monsanto and others in the fight for biodiversity. Could you tell us about some of those experiences and what it takes to counter the narrative, especially when backed by power and money?

Even though I had studied physics and done a Ph.D. on the foundations of quantum theory, I was compelled to turn my attention to agriculture in 1984 when violence erupted in Punjab and the leak from the pesticide plant of Union Carbide killed thousands in Bhopal. I asked myself why we were practising agriculture that killed so many. I wrote 'The Violence of the Green Revolution'.

When I attended a meeting on New Biotechnologies, the corporations talked about how they would be by 2000, all seeds would be GMOs and owned by them, and laws would prevent farmers from saving seeds. That is when I made a commitment to save seeds. In 1991, Navdanya was established.

My work challenges the corporate narrative of GMOs. I have taken them to court because they entered India illegally with Bt Cotton. I have challenged their biopiracy of neem, wheat, and basmati rice.



Technology is a tool. Tools help us transform nature's gifts to meet basic needs. The fewer resources and energy technology uses, the more ecologically and socially efficient it is. The more it extracts from the earth without giving back, the more ecologically and socially destructive it is.

They have threatened me. They tried to block my communications. My website is still down. But I continue my commitment to truth, to the earth, to society. Every attack energises me to do more.

I am grateful for their attacks because they have increased my determination.

As we said in a prayer in school, "The steel is strong because it knows the hammer and white heat."



? What is your view of contemporary development models? What is an alternative paradigm to create a sustainable, healthy and accessible food system?

The US, the World Bank and International Monetary Fund created a development model to recolonise it through debt and dependence. I have contributed to the book 'The Development Dictionary', which deconstructs development from within, instead of it being imposed from outside. This is Swaraj and Swadeshi.

? You teach the principles of Gandhi's '4S' (Swaraj, Swadeshi, Sarvodaya and Satyagraha). Tell us more about their potential applications in India and globally.

Over the past four-and-a-half decades of my service to the Earth, my intellectual journey to transcend the mechanical mind, my engagement in creating living economies based on non-violence and real creativity, living democracies based on real freedom, and living cultures based on love and compassion, I have always turned to our struggle for freedom from the British Empire, and Gandhi's teachings for inspiration.

It helps me to act in times of hopelessness, to open spaces when all spaces are shrinking, to cultivate compassion and solidarity in times of greed, fear and hate, to reclaim our power even when we are being told power is the monopoly of those who derive fake power from money, and money alone.

While times have changed, the patterns of colonisation stay the same. It is based on violence, destruction of people's freedoms and economies, taking what is not yours, collecting unjust rents, creating constructs of divide and rule, and supremacy. And the patterns

of liberation and freedom are perennial. And these contours of freedom shape the path for the resurgence of the real.

Swaraj: self-organisation, self-rule, self-governance, and autopoiesis are the basis of real freedom in nature and society, beginning at the smallest level, and emerging at higher levels. Resistance by itself does not create freedom from oppression. We need to sow the seeds of real freedom in our imagination, in our daily lives, through our everyday actions, and in our diverse and multiple relationships.

Swadeshi is self-making, based on local resources, indigenous knowledge, and community. It allows the expression of our fullest creativity as human beings and as earth citizens. In swadeshi, we are co-creative with nature's intelligence, creativity, and regenerative potential, and the creativity and intelligence of our fellow human beings. As co-creation with nature, it combines production with conservation. It is not extractive, polluting, and degrading to the planet and human communities. It is the foundation of sustainability. It is the core of economic democracy. It is the source of real wealth, of well-being and happiness for all.

Sarvodaya is the upliftment of all through self-organisation, self-determination and equality and justice.

atyagraha is the deepest practice of democracy. The moral duty to not cooperate with unjust and brute law and exploitative and undemocratic processes. This is the first step in breaking free of an enslaving, colonising system. 'Satyagraha' – the force of truth – is Gandhi's word for non-cooperation with systems, structures, laws, paradigms, and policies that destroy the earth and rob us of our humanity and our freedoms, that crush our potential for compassion and sharing, that atrophy our hearts, minds, and hands.

As Mahatma Gandhi said, "As long as the superstition exists that unjust laws must be obeyed, so long will slavery exist."

Since 1987, when I first heard corporations' talk of owning seeds through Intellectual Property Rights (IPR), my conscience and my mind did not accept it. I made a lifetime commitment to saving seeds, and decided not to cooperate with IPR systems that make seed saving and seed exchange a crime.

Since 1991, Navdanya has organised farmers through the Bija Satyagraha Movement to keep seeds in farmers' hands, not to cooperate with IPR Laws and the Seed Act, based on the illusion that seeds are inventions of corporations like Monsanto, which, based on the illusion, make seed a corporate monopoly and make seed-saving and seed-sharing a crime.





While times have changed, the patterns of colonisation stay the same. It is based on violence, destruction of people's freedoms and economies, taking what is not yours, collecting unjust rents, creating constructs of divide and rule, and supremacy.

In 1993, half a million farmers participated in a historic Bija Satyagraha rally at Bangalore's Cubbon Park. This was the first international protest against the General Agreement on Tariffs and Trade and the World Trade Organisation.

Bija Satyagraha (Seed Satyagraha) is a people's movement for the resurgence of the real seed, of the intelligence of farmers to be breeders and to coevolve with the intelligence of the seed towards diversity, resilience, and quality. It is a movement that springs from the higher laws of our being members of the earth community - *Vasudhaiva Kudumbakam*. From the higher laws of our duty to care, protect, conserve, and share.

The Bija Satyagraha pledge that our farmers take says, "We have received these seeds from nature and our ancestors. It is our duty to future generations to hand them over in the richness of diversity and integrity in which we have received them. Therefore, we will not obey any law, or adopt any technology that interferes with our higher duties to the earth and future generations. We will continue to save and share our seeds."

The Bija Satyagraha is against Monsanto and its attempt to patent seeds and collect royalties. The Jal Satyagraha is against Coca-Cola in Kerala and Doon Valley, it is against water privatisation in Delhi, against industrial aquaculture in Tamil Nadu, Andhra Pradesh and Orissa. It had been initiated by women, and it successfully protected people's right to safe drinking water. (water privatisation vs water democracy, Ganga, a common heritage or privatised commodity).

The Sarson Satyagraha was against the dumping of GMO soya oil in 1998 and the attempt to introduce GMO mustard in 2015. The Satyagraha for Gandhi's Ghani has brought to centre stage

the right to safe, healthy food (mustard vs soya through 25 years of Bija Satyagraha).

The satyagrahas of the tribals in Niyamgiri, and peasants in Singur, Nandigram, and the struggles against POSCO companies stopped the corporate land grab unleashed by globalisation (the Great Indian Land Grab). These are just a few examples of the continuing power of satyagraha against the most violent resource-grab and wealth-grab of giant global corporations in our times.

? How can humans create a better society through food
● **communities based on justice and stewardship of the natural world?**

We have given a call to action for seed sovereignty and food sovereignty from October 2, Gandhi's birth anniversary to October 16, which is World Food Day.

The principles for regenerating the earth and ensuring food justice are:

1. The right to save and share the open pollinated seeds that provide us with nourishment and climate resilience. Saying no to patents on life and patents on seeds.
2. The right to health and safety, food sovereignty and food freedom. The right to biosafety regulations that regulate the old and new GMOs. The deregulation violates the democratic rights of citizens and the rights of mother earth and the integrity of her species.
3. The farmers' rights and rights of farmers, pastoralists, and fisherfolk to livelihoods and to their right to provide society with real, healthy, nourishing food.
4. The freedom of all beings from poisons and agrochemicals that are the basis of

industrial agriculture. The right to practise diverse systems of farming with nature: agroecology, regenerative farming, organic and natural farming.

5. The freedom from fossil fuels and negative energy systems that use 10 times more external energy inputs than they produce.
6. The right to food for all and freedom from speculation and monopolies that create price rise and scarcity, stealing food from the poor and vulnerable. Food is a public good. Governments must regulate financial giants and ensure no one goes hungry.
7. The freedom to conserve our biodiversity of plants and animals and participate in our diverse cultures and knowledge systems that regenerate the planet, our life, health and freedom.
8. Our bread, our food, is our freedom. We are co-creators and coproducers with our fellow beings who are members of our one earth family that consist of our animals on farms and pastures, the fish in the waters, the earthworms and mycorrhizal fungi in the soil, the insects that weave the web of life and the food web.
9. [Former American Secretary of State] Henry Kissinger had declared, “Food is a weapon.” In today’s world of fake science and fake economics, patented ‘fake food’ is the new weaponisation of food. It is being

imposed through systems of food racism, food fascism and food totalitarianism. We will not let this racism destroy the earth, our health, and our freedom. We are sowing the seeds of food peace, making peace with the earth and ensuring no one goes hungry, no one is unhealthy because of an unhealthy, disease-creating industrial food system. Food peace is food sovereignty, food democracy, and food freedom. Food peace is food for all, health for all, and work for all.

Ideas for Action

- Promote and protect the biodiversity richness in our forests, our farms and our food to stop the destruction of the earth and the sixth mass extinction.
- Promote local, organic, healthy food through local biodiverse food systems and cultures and economies of care (farmers markets, community-supported agriculture, and bio-districts).
- Practice sustainable agriculture based on the integration of a diversity of crops, trees and animals.
- Save, grow and reproduce traditional seed varieties to safeguard biodiversity. They need to be saved not as museum pieces in germplasm banks, but in living working seed banks as a basis of a health care system.
- Create poison-free zones, communities, farms and food systems.





Sustainable ecological systems can address climate change by shifting the food system to fossil fuel-free, chemical-free, local circular economies which return nutrients and water to the earth, fair and just incomes to small farmers, and provide healthy food to cities.

- Support, regenerate and strengthen communities.
- Create Gardens of Hope, Gardens of Health everywhere – in community gardens, institutions, schools, prisons, and hospitals in the cities and countryside.
- Demand that the government stop subsidising industrial agriculture and unhealthy systems that create a burden of disease. Public subsidies should be redirected to systems based on agroecology and biodiversity conservation, which provide health benefits and protect common goods.
- Demand that the government halt subsidies and further investments in the fossil fuels' sector, including fossil fuel-based agricultural inputs, as real climate action.
- Demand that the local/national governments and the municipality stop favouring industrial junk food and unhealthy food systems based on toxic and nutritionally empty commodities.
- Demand that the local/national governments and the municipality put an end to monocultures, genetic manipulation of plants and factory farming of animals which are spreading pathogens and antibiotic resistance.
- Demand that the governments stop deforestation, which is expanding exponentially through industrial monocultures for corporate interests. Forests are the lungs of the earth.
- Demand that the government and international bodies introduce policies to assess the costs of damage to health and the environment caused by chemicals and enact the polluter pays principle.
- Demand that the government and international bodies put health as a priority over corporate interests concerning chemical and pesticide use in food and agriculture

The precautionary principle must be enacted.

? The latest report by the United Nations Intergovernmental Panel on Climate Change deals with the physical impact of climate change. The link between climate change and its impact on all aspects of our lives, including food production, is undeniable. What will it take for us to move towards a more sustainable socio-economic framework of action?

Since 50 percent of the greenhouse gases come from an industrial food system, changing the food system through earthcare is the most significant climate action.

Industrial agriculture based on chemical monocultures is becoming life-threatening for the planet's self-regulatory climate systems.

Industrial monocultures are an important driver of destruction and erosion of biodiversity, both in forests and farms. The Amazon and the Indonesian rainforests are being destroyed for growing monocultures of roundup-ready soya and palm oil.

Deforestation by agribusiness also contributes to 20 percent of greenhouse gases.

As my book 'Soil, not Oil' and the Navdanya manifesto on climate change and the future of food show, 50 percent of the greenhouse gas emissions that are driving climate chaos come from an industrial food system based on fossil fuels and chemicals and are driven by greed.



to the destruction of the human potential for food production and consumption through food systems that reduce our fossil carbon footprint while increasing biodiversity to grow healthy food everywhere, in cities and the neighbouring countryside.

? How do you define food sovereignty? Do you think food sovereignty contributes to improving global biodiversity and preserving local culture?

Food sovereignty is swadeshi and swaraj in the area of food. When we use local resources and regenerate and conserve biodiversity, we regenerate the earth and local cultures. Each region of India and the world has evolved local food cultures based on local diversity. When we eat local diversity, we regenerate biodiversity.

Local food economies reduce our ecological footprint while increasing the diversity of our food sources. We used to eat more than 10,000 plant species globally. Only in the last few decades are we eating industrially grown and processed food from a handful of commodities. This system is destroying our health and the health of the planet. Chronic diseases have spread. About 75 percent of diseases are due to ultra-processed food. Food sovereignty is growing life, growing a healthy planet and healthy people.

? As you have pointed out many times, women grow and raise most of the world's food. Why is nutritional sovereignty so important for women?

Nutritional sovereignty is important to women because they continue to practise the economy of care. Care for the earth, care for their children and family, and care for their families and community.

Humanity has to shift from an economy of greed to an economy of care as I have written in my recent book, 'From Greed to Care' – The revolution necessary for a sustainable economy' published by EMI in Italy.

The industrial food system is responsible for 44 to 57 percent of all global greenhouse gas emissions.

Industrial agricultural production based on fossil fuels and chemicals is 11-15 percent.

Land use change and deforestation, including GMO soya destroying the Amazon by 15-20 percent.

Processing, transport, packaging, retail of industrial food 15-20 percent.

Waste 2-4 percent.

We cannot address climate change, and its consequences, without recognising the central role of the industrial and globalised food system, which contributes more than 50 percent to greenhouse gas emissions through deforestation, animals in concentrated animal feeding operations, plastics and aluminium packaging, long-distance transport and food waste.

Sustainable ecological systems can address climate change by shifting the food system to fossil fuel-free, chemical-free, local circular economies which return nutrients and water to the earth, fair and just incomes to small farmers, and provide healthy food to cities.

The atmosphere and biosphere are nonseparable, the city and the country are interconnected systems of Gaia, the living earth connected through nutrition cycles.

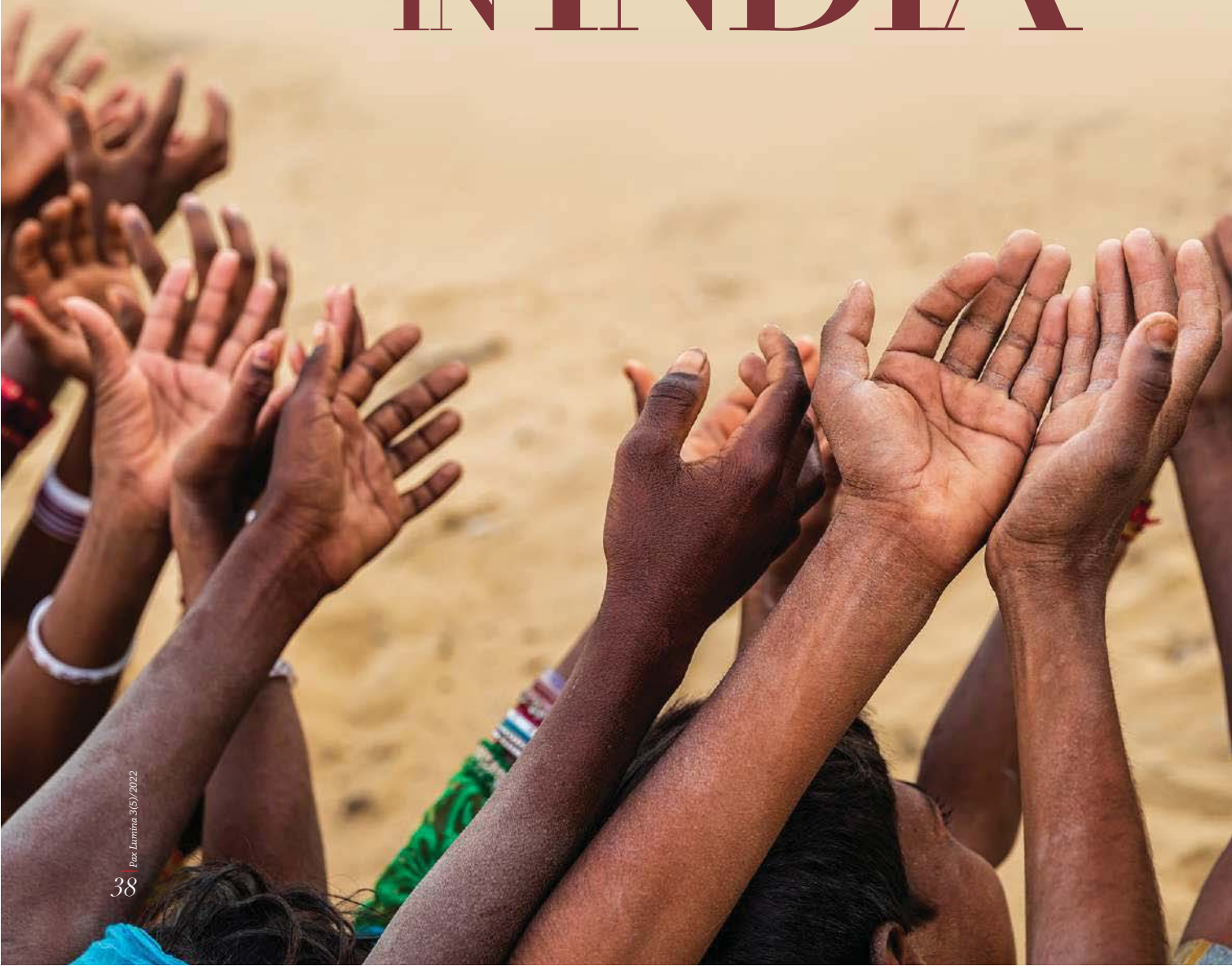
The destruction of the earth's capacity to create, maintain and regenerate living processes that sustain life and the well-being of all is connected



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Pax Lumina 3(5) / 2022 / 38-40

FOOD SECURITY IN INDIA



Food Security envisages its availability, accessibility and affordability to the people in various regions. An increase in the supply of food is not sufficient to maintain food security.

Food security for a household means access by all members at all times to enough food for an active and healthy life. It includes a ready availability of nutritionally adequate and safe foods and an ability to acquire this in socially acceptable ways. The increase in the growth of population, the rise in the price of oil, war between the countries and other factors are the major reasons that have led to the global food crisis.

The major concerns are availability, accessibility and affordability.

Availability is identified through internal production and imports from other areas. Accessibility is recognised through the ability of people to get access to adequate food from nearby areas. Affordability means whether the people have purchasing power. The income earned by the people has been spent in the market to purchase food items. Food absorption is also necessary for food security. The absorption of the food depends on the digestion and nutrition of the body. These issues are the major aspects of the food security scenario.

In India, 40.6 per cent of the population suffered moderate or severe food insecurity in 2019-21. India ranked 76th out of 113 countries as assessed by the Global Food Security Index in 2018.

The population increased from 1.03 billion in 2001 to 1.21 billion in 2011. The sex ratio has begun to improve, from 927 in 1991 to 933 in 2001 to 940 in 2011. Sustainable Development and sustainability should be achieved through the proper management of the land and the resources to become sustainable food security. The world population is increasing tremendously. The lack of growth of foodgrains or its misappropriation leads to a food crisis.

The commercialisation of agriculture is one of the reasons for the crisis. The use of biofuels leads to more demand for agricultural products, especially foodgrains. Apart from this, food products are also used for extracting ethanol. The developing countries concentrate more on the production of biofuels and are commercialising agricultural products. Subsequently, the availability of agricultural products, especially foodgrains is decreasing in the market. It leads to the high price of the available food items.

The rise in the price of crude oil is also the reason for the global food crisis. It leads to an increase in transportation costs and related



The developing countries concentrate more on the production of biofuels and are commercialising agricultural products. **Subsequently, the availability of agricultural products, especially foodgrains is decreasing in the market.**



activities. This also leads to an increase in the price of available foodgrains.

War and the growing number of trade restrictions have worsened the situation. It has led to a decrease in the domestic supply and increased the price of food items.

The concentration on cash crops rather than food crops, because of more remuneration for the former and also the usage of land for non-agricultural activities, on account of urbanisation and industrialisation, has led to a decline in agricultural production.

Due to urbanisation and industrialisation, there is an over-exploitation of natural resources. This leads to environmental pollution. Hence, the concept of sustainable development will not be achieved. Because, the resources are fully utilised for the present generation, we might not be able to feed future generations.

However, regarding food security, India has major achievements in the Public Distribution System (PDS). In PDS, the foodgrains are available at subsidised rates. India has a large network of PDS. The State of Kerala has a well-maintained PDS system.

The other aspect is the Minimum Support Price (MSP) of foodgrains and the procurement of foodgrains. The Integrated Child Development Scheme, pensions and cash benefit schemes

for mothers have also been adopted by the government. The mid-day meal programme was introduced for school-going children aged between 2-14.

The production of foodgrains increased four-fold, from 51 million tonnes in 1951 to 217 million tonnes in 2007. The estimated record food grain production in 2021-22 is 305.44 million tonnes. This is higher by 7.94 million tonnes than 2019-20. According to the statement made by Food Secretary, Government of India, Sudhansu Pandey, India's rice production could fall by 10 - 12 million tonnes during the Kharif season this year due to fall in paddy sowing area.

In conclusion, food production and distribution channels are interconnected. There is a need to ensure food justice. The people must have the right to produce food with dignity, have control over the parameters of production, and get just value for their labour and their produce.

The government should maintain the right of the people to feed themselves in dignity, ensuring that sufficient food is available, that people have the means to access it, and that it adequately meets the individual's dietary needs. They should also get just value for their labour and their produce.

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GLOBAL FOOD CRISIS

The UN PERSPECTIVE



Prices of mineral fertilisers have tripled since 2020, creating significant problems for farmers worldwide, and leading to the high prices of food everywhere. **High prices, coupled with a lack of availability of mineral fertilisers in 2022 due to the ongoing war, would mean reduced food production in 2023.**



Zero hunger by 2030!

Yes, global leaders made a historic commitment in 2015 when they gave their assent to the 2030 Agenda for Sustainable Development. Current data on hunger and food security indicates the goal to achieve: “End hunger, achieve food security and improved nutrition and promote sustainable agriculture” (SDG2) will remain an aspirational goal.

A lack of urgency and failure to address the triple planetary crisis – climate change, pollution, waste and biodiversity loss – to contain global warming will push millions more people into food insecurity.

The right to food is recognised in Article 25 of the Universal Declaration on Human Rights and the International Covenant on Economic, Social and Cultural Rights and many other instruments. The right to food is defined by the Committee on Economic, Social and Cultural Rights in 1999 as, ‘the right to adequate food is realised when every man, woman and child, alone and in community with others, has physical, and economic access at all times to adequate food or means for its procurement’.

The right to food protects all human beings to live in dignity, free from hunger, food insecurity and malnutrition. The right to food is not about charity, but about ensuring that all people can feed themselves with dignity. It means food should be available, adequate and accessible to all.

Since 2014, the number of people experiencing hunger has been on the increase. Pre-pandemic,





two billion people were experiencing moderate to severe food insecurity. According to the World Food Programme, the world faces a global 'hunger crisis of unprecedented proportions, for as many as 828 million people go to bed hungry every night'.

A vast majority, 98 percent of these people are from developing countries and 60 percent of these are women. Nine million people die of hunger and five million children die of malnutrition. Today, hunger kills more people than HIV/AIDS and malaria.

Poverty is the No. 1 cause of hunger. People facing or at risk of acute food insecurity increased from 135 million in 53 countries, pre-pandemic, to 345 million in 82 countries today. Women and children living in food crisis countries are vulnerable to malnutrition. 144 million children under the age of five are suffering from stunting (low weight for age), and another 47 million are wasting (low weight for height.)

A vast majority of these children live in conflict zones. Malnutrition in all its forms, including obesity, inhibits future development and affects health, education, and gender. It costs the economy billions every year through lost productivity and healthcare.

According to the Food and Agriculture Organisation (FAO), global food production and stocks are at historic high levels in 2022, just slightly lower from 2021. Then why is food insecurity not a global concern for governments and a life and death issue for people living in vulnerable situations? Even when food is available, the poor cannot afford the high prices.

The high prices of food are a result of market speculation and profiteering, more than the current war in Ukraine. The World Food Programme is most impacted by the Russian invasion of Ukraine, since it is the single largest buyer of grain from Ukraine for the last five years for its humanitarian programmes.

Some of the drivers of malnutrition and food insecurity are conflicts, climate extremes, the COVID-19 pandemic, economic volatility, poverty, high levels of inequality and the ongoing war in Ukraine. Prices of mineral fertilisers have tripled since 2020, creating significant problems for farmers worldwide, and leading to the high prices of food everywhere. High prices, coupled with a lack of availability of mineral fertilisers in 2022 due to the ongoing war, would mean reduced food production in 2023.

Many of the world's food systems are fragile to provide adequate food. Around three billion people, almost half of humanity cannot afford a healthy diet. Food production is increasingly vulnerable to the adverse impact of climate change, and extreme weather conditions like droughts and floods.

Humanitarian agencies have been warning the global community about the famine-like situation developing across the Horn of Africa, where 22 million people are struggling to find enough to eat, because of prolonged drought across East Africa.

Another aspect is the ecological harm caused by dominant modes of food production, which can further deepen food scarcity. Corporate capture of food systems (they played a large role in shaping the agenda of the UN Food Systems Summit in 2021) is on the increase.

Food loss and waste undermine the sustainability of the food systems. When food is lost or wasted, **all the resources used to produce this food - water, land, energy, labour and capital - go waste. It is a moral failure and an environmental catastrophe.**



Private financial institutions, tech giants and corporations make huge profits from the agriculture and food sector.

Food Loss and Waste (SDG 12.3.1) is a complex issue. Reducing food waste and loss can benefit people and the planet. It will improve food security, address climate change, save money and reduce pressures on land, water, biodiversity and waste management systems.

According to 'Driven to Waste: Global Food Loss on Farms', a new report from World Wildlife Fund and Tesco, an estimated 2.5 billion tonnes of food goes uneaten around the world each year. It amounts to 40 percent of all the food produced and would have required an area larger than the Indian subcontinent to produce.

Of the total waste and loss, 1.2 billion tonnes (15.3 percent) is lost on the farms; retail, food service and consumer homes (61 percent) waste another 931 million tonnes.

Food waste on the farm happens due to inadequate harvest time, climatic conditions and practices used in harvesting and handling. A lack of ability to warehouse and store, and lack of technical know-how for the preservation of food. Contrary to common belief, 58 percent of global harvest waste occurs in high-and middle-income countries of Europe and North America.

Food loss and waste undermine the sustainability of the food systems. When food is lost or wasted, all the resources used to produce this food – water, land, energy, labour and capital – go waste. It is a moral failure and an environmental catastrophe.

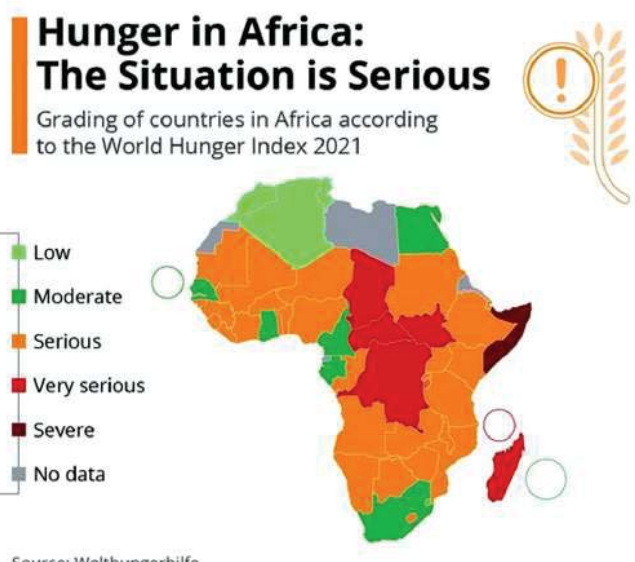
Food loss and waste are dumped in landfills. This leads to greenhouse gas emissions. This

is 10 percent of the total greenhouse gas emissions, which contributes to global warming. Reducing food loss and waste is essential in a world where people affected by hunger are on the increase. For a resilient and sustainable food system, there is a need for the adoption of integrated approaches designed to reduce food loss and waste.

Tackling food loss and waste alone can change the food insecurity situation.

Smallholder farmers and women farmers play a huge role in global food security. Although these farms account for only 25 percent of the world's farmland, they produce almost 70 percent of the food in the world. Despite the key role they play, they are a vulnerable group, neglected by development policies. They account for most of the world's poor and hungry.

Women play a major role in sustaining food security as producers, agricultural entrepreneurs





and decision-makers. They can maintain the food and nutritional security of their households and communities and are managers of the stability of food supplies in times of economic hardship. They supply most of the labour needed to produce food, yet gender disparities in ownership of, access to and control of livelihood assets, such as land, water, energy, credit, knowledge and labour negatively affect women's food production.

Policies to address the challenges faced by smallholder farmers and women due to the size of their holdings, lack of access to financial and digital services, growing incidence of extreme weather events, price volatility and lack of access to modern markets are urgently needed to be attended to. Also, there is a need to strengthen their capacity for increased food production through innovative, sustainable and climate-resilient agricultural practices along with digital tech support.

Food Justice from a Rights Perspective

According to the FAO 'Right to Food Guidelines', endorsed by the states in November 2004, countries have three legal obligations - obligations to respect, protect and fulfil:

- The obligation to respect: governments should not take measures that arbitrarily deprive people of their food.
- The obligation to protect: governments should enforce appropriate laws and take other relevant measures to prevent third parties, including individuals and corporations, from violating the right to food of others.

- The obligation to fulfil (facilitate and provide): Governments must proactively engage in activities intended to strengthen people's access to and utilisation of resources to facilitate their ability to feed themselves. As a last resort, when individuals or groups are unable to enjoy the right to adequate food for reasons beyond their control, states must fulfil that right directly.

People are the rights holders; governments are the duty bearers. We need to hold our governments accountable for failing to provide for their people. The Right to Food Guideline 8.1 provides avenues to further advocacy measures and legal recourse to uphold the right to food: 'States should facilitate sustainable, nondiscriminatory and secure access and utilisation of resources consistent with their national law and with international law and protect the assets that are important for people's livelihoods.'

States should respect and protect the rights of individuals concerning resources such as land, water, forests, fisheries and livestock without any discrimination. Where necessary and appropriate, States should carry out land reforms and other policy reforms consistent with their human rights obligations and follow the rule of law to secure efficient and equitable access to land and strengthen pro-poor growth. Special attention may be given to groups such as pastoralists and indigenous people and their relation to natural resources'.

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Brian Brozovic and Ted Peters

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Meet the New Meat

**What are the questions to which
the new meat could be the answer?**



1 How might we increase the availability of low-cost protein to the world's poor who lack a healthy diet?

2 How might we tantalise the taste buds of the world's affluent with new protein delicacies that will reduce their consumption of burgers, steaks, chops, and Kentucky Fried Chicken?

3 How might we meet the demand for meat with a supply that virtually eliminates the slaughtering of beef cattle and chicken factory farms?

4 How might vegetarian and vegan diets up their animal-based protein without the suffering of animals?

5 How might animal rights advocates win a victory on behalf of nonhuman sentient creatures?

In what follows, we will offer some background while describing two promising frontiers in new food technology. The first is plant-based meat substitutes. The second is genuine meat grown 'ex vivo' without slaughtering an animal. Then, we will raise religious and ethical issues. It's time to meet the meat.

Today, we find ourselves on the brink of a dramatic food revolution. **What is about to happen is not merely an improvement in the quality or quantity of meat production. Rather, the new meat technology will lead us to re-think meat.**



As we address the global food crisis with food justice in mind, the possible revolution in meat production offers a hopeful technological fix. But, we must ask a cultural question: how might our very understanding of meat be affected by traditional religious doctrines and values?

From where have we come?

Since the beginning of Homo sapiens' prehistory, when hunting became the primary source of animal proteins, very little has changed. Nothing has massively moved the needle in terms of technology. We have made great advances in meat science and technology, to be sure. But these advances have typically been around how we produce better quality products. By better quality, we think of taste, texture, and nutrient content.

The advent of animal domestication provided an advance over hunting because it made the food source easier to secure and easier to maintain a consistent supply. The industrialisation of domesticated animal agriculture took it one step further by creating an environment that could reproduce consistency with stellar results. Selective breeding and programmed heredity have led to technologies such as artificial insemination and genetic alteration to improve the species' pre-mortem and post-mortem merits.

Today, however, we find ourselves on the brink of a dramatic food revolution. What is about



Professor Yaakov Nahmias, Founder and Chief Scientific Officer, Future Meat Technologies

to happen is not merely an improvement in the quality or quantity of meat production. Rather, the new meat technology will lead us to re-think meat. Just what is meat? And, how does meat fit into a larger worldview? This includes the human diet plus living on a planet with so many of God's nonhuman yet sentient creatures. (Thompson, 2020)

Option One: Plant-Based Meat Substitutes

It's the 'impossible burger'. It may be called 'meat', but it is a vegetable.

The advent of using plant-based ingredients to mimic the taste, texture, and nutrient content of animal-based meat products is a promise to meat-eaters who want to break the habit. Vegetarians or vegans who like the word, meat, yet avoid eating meat, welcome veggie burgers.

How do we get the fake meat? The impossible meat? One technology is to extract soy leghemoglobin from genetically engineered yeast. What Impossible™ calls "heme" is the iron-rich molecule like that of animal-based hemoglobin. (Impossible)

This soy leghemoglobin is the ingredient that Impossible™ uses to help make the colour, and presumably the eating experience, resemble that of real meat.

Plant-based alternative proteins and hybrid products have produced some creative meat substitutes. A market for those who like the taste and texture of meat substitutes is growing. The question remains if the customer is going to accept the organoleptic properties, which are sure to improve through advances in technology. Let's see if the sourcing of raw materials will stand up to the demand.

Will fake meat attract vegetarians?

Could this be good news in India? According to the Pew Research Centre, the vast majority of Indian adults (81%) follow some restrictions on meat in their diet, including refraining from eating certain meats, not eating meat on certain days, or both. However, most Indians do not abstain from meat altogether – only 39% of Indian adults describe themselves as 'vegetarian', according to a new Pew survey. While there are many ways to define 'vegetarian' in India, the survey left the definition to the respondent.

What is puzzling is the apparent contradiction between ideological vegetarianism and the fiction of fake meat. If one becomes a vegetarian guided by moral principles such as avoiding the

sacrifice of animals, then pretending to dine on meat at dinner seems like ceding primacy to the carnivores. One would expect so-called 'impossible meat' to have a name such as, 'impossible legumes'. Be that as it may, the moral and ethical issues become far more acute when we turn to cultivated meat products.

Option Two: Cultivated Meat Products

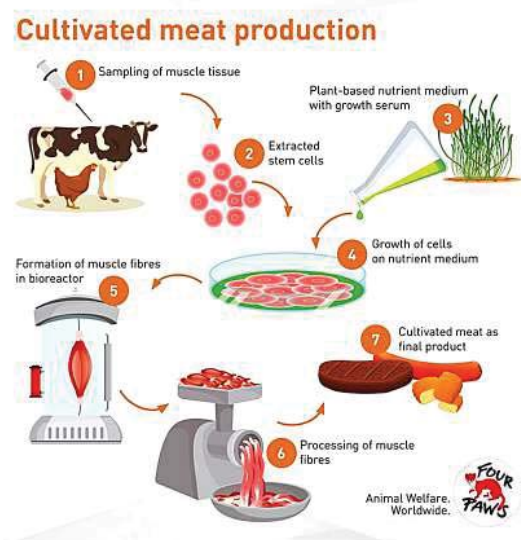
The second and even more revolutionary technology that has seen advances recently is the use of cellular-based meat products without the need for an animal source. To be clear, this means there is no need to slaughter an animal to obtain roasts, steaks or chops. To be even more clear, to initiate cellular-based meat production a cell colony of at least one animal must be obtained and most likely without the animal's permission. No harm is done to the animal.

This new technology is known by a variety of labels, even if the technology is similar: Cell/cellular-based meat; cultivated meat; cultured meat and alternative meats.

This technology promises to eliminate the need for animals for food production, at least after a minimally-invasive initial DNA sample (essentially a biopsy) of cells that can be secured and then stored away in a cell bank.

"Cultivated meat is animal meat that does not require any farming, slaughtering, or harming of animals." (Future Meat)

What is puzzling is the apparent contradiction between ideological vegetarianism and the fiction of fake meat. **If one becomes a vegetarian guided by moral principles such as avoiding the sacrifice of animals, then pretending to dine on meat at dinner seems like ceding primacy to the carnivores.**



Does the initial sample not harm the sentient animal? We know we feel pain from biopsies. So, will consumers who see this way refuse to eat a product that was originally sourced using a potentially painful, albeit minimal, approach? Or, will a biopsy be seen as more humane than slaughtering?

Cultivated meat technology is centred on a few assumptions that make the products preferred above live animal agriculture and slaughter. By having a shorter production cycle of only two to eight weeks, according to the Good Food Institute, a non-profit tasked with promoting plant-based alternative protein and cell-based products, the turnaround of the product is considerably faster than traditional animal agriculture.

It will help lend itself to feeding a growing population and demand for protein products. Professor Yaakov Nahmias, founder and chief scientific officer of Future Meat Technologies said, "This facility demonstrates our proprietary media rejuvenation technology in scale, allowing us to reach production densities 10-times higher than the industry standard." (Meat & Poultry)

Not Stem Cells. Rather, Fibroblasts.

The science of cultivated meat technology leads to interesting theological implications. We find ourselves overlapping with the stem cell debate in bioethics.

Yaakov Nahmias acknowledges that cultured meat can be made from a variety of cell types. While most companies chose to work with stem cells, these cells are unstable and difficult to expand. This is because embryonic stem cells in nature exist for a very short time. Adult stem cells may live longer but require specialized environments. Efforts to grow these cells at large scale require either genetic intervention or expensive growth conditions.

Instead, Nahmias tells us, Future Meat Technologies has chosen to work on fibroblasts. These are cells of the connective tissue that are robust and grow efficiently, even in difficult environments. This is because fibroblasts are naturally called upon to rapidly repair injuries such as cuts and bruises. More importantly,

Cultivated-meat technology may have benefits for ecology. It reduces the need for live animals to take up space and devour resources. **Fewer live animals mean less land and water depletion. It means producing fewer greenhouse gases. It means reducing agricultural deforestation and biodiversity.**



fibroblasts can undergo a process termed spontaneous immortalization in which cells rearrange their chromosomes and start growing indefinitely without genetic intervention. Thus, Future Meat's cell stock for chicken, lamb, beef, and pork is non-GMO.

Now, for one theological implication. Would cultivated meat be kosher? Yes, says Nahmias. The first prohibition is *Ever Min Ha-Hai* (Hebrew) a biblical injunction against a removal of a piece of flesh from a living animal and its consumption. Deuteronomy 12:23 states "and thou shalt not eat the life with the flesh". The prohibition is one of the seven Noachian Laws (Genesis 9:4).

To keep cultivated meat kosher, Future Meat Technologies does not isolate cells from a biopsy from a living animal. Instead, they isolate fibroblasts from discarded tissue taken from an animal that was slaughtered in a Kosher process. This ensures that the meat produced would be both kosher and halal. As the cells immortalize and grow forever, the process of



taking the cells only has to happen once and no other contact with animals or their ingredients occurs during the manufacturing process of cultured meat.

The New Meat and Ecological Healing

Cultivated-meat technology may have benefits for ecology. It reduces the need for live animals to take up space and devour resources. Fewer live animals mean less land and water depletion. It means producing fewer greenhouse gases. It means reducing agricultural deforestation and biodiversity. It means fewer zoonotic outbreaks. And it also means less antibiotic resistance. Now, the data is not yet definitive on a scalable level. Yet, a cultivated-meat industry on a large scale should make any eco-ethicist's mouth water.

From a food safety perspective, the cellular-based technology touts a reduced risk of enteric pathogens of concern. Yet, because it is a food product, there is still a risk from non-enteric sources.

In the United States of America, the production of cellular-based meat products is highly regulated by both the United States Food and Drug Administration (FDA), as well as the United States Department of Agriculture (USDA). Overly simplified, the FDA has the regulatory authority over the cell growth phase of production, whereas the USDA has the regulatory authority over the produced biomass through packaging and distribution.

While the technology of cellular-based meat is

cutting edge in the food industry, it is not new to other fields. Using biotechnology in other sectors such as medicine has been ongoing. (Specht et al)

“Decades of accumulated knowledge in cell culture, stem cell biology, tissue engineering, fermentation, and chemical and bioprocess engineering preceded the field of cultivated meat.” (Good Food Institute)

The technology used in biomedical engineering and cell-cultured meat products is also being used in food applications other than meat, including in milk and dairy products, without the need for animal agriculture.

Cultivated Meat: A Brief Science Overview

Here is a very brief and simplified version of the process.

1. Animal cells are sourced via a biopsy technique from either a live or recently slaughtered animal. These cells will be self-renewing in the laboratory setting. So, once an initial sample of cells is taken, there are no additional needs for a live animal. Different types of cells can be taken based on the overall needs and applications (meat, fat, connective tissue, specific organs) for those cells.
2. Those cells taken for self-replication are brought into a lab environment, where they are introduced to a growth medium to supply needed nutrients. The starter period of growth and replication begins. In this phase, the cells are ‘retrained’ and ‘reprogrammed’

using gene-editing techniques to produce the exact type of cells desired. (Ito, 2017) (Wu, 2017)

3. An initial collection of starter cells is introduced to a bioreactor to continue growth in a highly controlled environment (time, temp, oxygen levels, pH). They are carefully nourished with a proprietary growth medium that can include glucose, inorganic salts, water-soluble vitamins, amino acids, recombinant proteins, growth factors, hormones, lipids, and antioxidants. In some proprietary blends, Foetal Bovine Serum is used in the medium, but that requires a sample from a foetal bovine. So, some companies are now using techniques that can gather the needed growth factors using all plant-based sources, such as algae, fungi, and microorganisms.
4. These cell colonies grow and form collections of tissue called biomass. The biomass is often combined with an extracellular scaffolding (think watermelon structure, cellulose) to create a bulk tissue. This bulk form of biomass becomes a steak. Biomass can be combined with plant-based proteins to create hybrid products.
5. After this harvesting, products are packaged and distributed for consumption.

What is revolutionary is that what we put on the dinner table does not require the sacrifice of an animal. Yet, we are eating meat in a form that prepares us for nourishing new recipes.

When restaurants compete for customers with attractive new recipes, the worldwide market will grow. Production will rise to scale. The gross number of animals worldwide will decrease. Prices will drop. Protein-rich products will become increasingly available for low-income people. Indirectly, food justice goals will be approached.

The Public Theologian Asks...

It is time for the public theologian to inquire: how will those for whom vegetarianism is religion-based consider cultivated meats? (Peters, 2018)

Brian Brozovic is a student at the Pacific Lutheran Theological Seminary and Ted Peters is an emeritus professor at the Pacific Lutheran Theological Seminary in Berkeley, California, USA. Visit Professor Peters' 'Patheos' column on Public Theology: <https://www.patheos.com/blogs/publictheology/>.

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Hyperlinks

Animal rights advocates: <https://thehumaneleague.org/article/animal-rights>

Impossible Burger: <https://impossiblefoods.com/>

Impossible™: Impossible™ Burger Made from Plants 12 oz Pack (impossiblefoods.com)

Impossible: What is soy leghemoglobin, or heme? – Impossible Foods

Pew Research Center: <https://onedrive.live>.

New Pew Research Center survey: <https://www.pewresearch.org/religion/2021/06/29/religion-and-food/>

Many ways to define “vegetarian”: <https://www.hindustantimes.com/india/what-kind-of-vegetarian-are-you/story-IpgalLvdrHqMgVj5VOrAvI.html>

Cultivated meat: <https://future-meat.com/>

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CULTIVATED MEAT AN INDIAN RESPONSE

Meeting the new meat (Ref. article by Brian Brozovic and Ted Peters) was a matter of joy, more for the conceptual shift indicates of modern science, from an anthropocentric framework in which it usually functions, to an inclusive approach, where all species in nature have been given their due place, than as a solution science has come up with to resolve the meat scarcity/avoidance of animal slaughter.

An Oriental mind would rejoice in learning that modern science has come to maturity and is ready now to willingly forget some of the old lessons it has picked up from its early proponents like Francis Bacon, who pronounced that science should extract truths from nature, so that we could control, and later manipulate her.

So far so good, but this is not sufficient to walk back all the way it has covered in distancing humans from Mother Nature. There is much more that science must unlearn, an act that might even end up in a paradigm shift in the discipline.

A philosophical assessment of any scientific achievement, for that matter, will be pitched on examining the motives that prompted the discovery, rather than the discovery per se. Viewing this, it is indeed a welcome sign that science has upgraded itself conceptually



by resolving to cause less peril to nature at large by minimising animal slaughter, but the so-called ethical concerns addressed are only skin-deep and do not take us far enough.

An Indian solution to this global problem of meat scarcity, will not lie in looking for artificial meat. No doubt it has multiple advantages. It can be produced as per the demand with minimum resources, and thereby permit the meat lovers to entertain their palate, and, what more, has the added advantage of taking up a non-violent approach to animals.

Well, here we are mixing up issues. It is one thing to look for alternative methods to make up for the shortage of meat resources and quite

another to adopt a non-violent approach towards animals. The two issues belong to different domains and hence must be treated differently.

For the former, the cultivated meat seems a good solution. It might turn out to be a success as well if the meat eaters find this artificial meat at par with the original one. But that should not be mixed up with our benevolent attitude towards other species in nature. It is here that we see the need for a thorough revamp of some of the foundational principles of modern science.

Humans, quite like other beings in nature, have all the right to consume other animals, but they have no right to pose themselves as the masters of nature and manipulate the species and create disorder.

In other words, it is not the slaughter of animals for food that is unethical, but man's intervention in the 'order of nature' and thereby disturbing its equilibrium that is unethical. Probably, it is not an ethical question, but an epistemic or ontological question, which

It is not the slaughter of animals for food that is unethical, but man's intervention in the 'order of nature' and thereby disturbing its equilibrium that is unethical. Probably, it is not an ethical question, but an epistemic or ontological question, which indicates modern man's lack of awareness of his place/responsibilities as a species in nature.

indicates modern man's lack of awareness of his place/responsibilities as a species in nature.

The 'Mahabharata' vouchsafes that ethical dilemmas prop up when you lack clarity about your beingness and your purpose in transactions with the phenomenal world. This way, all ethics get subsumed in the larger science of ontology!

It is wrong to claim that Hinduism advocates a fit-for-all vegetarian diet. In the 'Bhagavad Gita,' Lord Krishna speaks of three types of food usually consumed by three types of people: Meat has been consumed by communities that needed 'rajas' or physical exertion. It is neither advisable nor possible for every stream of society to consume the same food since people in different strata are expected to undertake different responsibilities: a warrior and a teacher should not/may not eat the same food.

Whatever stage or station you are in currently, you may remain there and live accordingly, but strive hard to improve your spiritual persona so that you may get a more refined life in the next birth. This is the sum and substance of 'Varnasrama dharma', the ways of living for the station one is in.

The message is clear: what is needed is not a tutored empathy towards other animals, but responsible living, fulfilling the duties assigned to you in this life. You may consume food that empowers you towards that and strive hard to refine your faculties so that you will have a natural empathy towards every living being on this earth.

A self-realised person, as Suresvaracharya, a great Advaitin says, is an embodiment of virtues. He is naturally virtuous. Only at this stage man participates in nature consciousness, and strives for the well-being of everything in nature, quite like nature herself. To cut short the argument, while it is a welcome feat to produce cultivated meat for pragmatic purposes, it is ideal that we don't mix it up with ethical issues.

A Hindu mind would fail to appreciate the moral take on it.

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Discomforting Delineations

The eye of a wound is looking deep into our eyes without blinking. Without realising the strength of its beaming power, we stare at it. It affects us. That is the result a sensitive mind gets after viewing the work titled 'Wounds' by Somnath Hore.

However, 'Wounds' is not a single work. It is a series of various kinds of wound marks on

plain white surfaces. According to modernist aesthetics, such works are 'abstract' in genre and do not communicate anything other than the subtle nuances of forms and colour.

In addition to the visual impact, the tonal gradations on the pictorial plane are what one has to engage in a work of art. It gives us a pictorial feeling without any baggage of reality

Wounds (Trial Proof), 1978. Etching



Trial Proof

wounds (B.4)

Somnath Hore, 1978



Untitled, Bronze 1988

Those works are not just some mute visual sensations provided by the pictorial elements. **They go beyond the surface; they provoke thoughts in us, they instil feelings in us, and they take us to the innumerable sufferings and pains of humanity.**

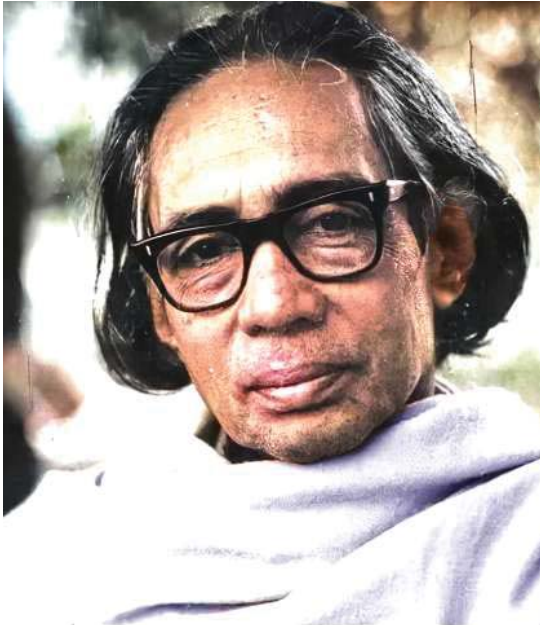


or a narrative. But, in the case of Hore, on the contrary, those works are not just some mute visual sensations provided by the pictorial elements. They go beyond the surface; they provoke thoughts in us, they instil feelings in us, and they take us to the innumerable sufferings and pains of humanity.

We bleed.

A deep concern for the hungry, the suffering and the exploited. The ordinary human being is what guides the art practice of Hore. In the wake of the Second World War, Hore was on the streets of Bengal, seeing and sketching the pains of the poor suffering human beings and animals. Not only war, but the British-made Bengal famine of 1943 took the humanist in this artist to the streets and the struggling people of the region.

The pains of exploitation as well as the pains of fighting against it formulated his images and imagination. Whenever he tried to draw an image or make an etching or intaglio print, the forms that came to his mind were the crisscrossing lines engraved on the faces of humans by their



Somnath Hore

weary, pathetic life situations; the wounds and marks made by the brutishness of war, and their hunger-swallowed-flesh.

War has always been a plaything for the privileged. They justified and glorified it with philosophy and their vanity. But, as an artist, Hore understood

In the wake of the Second World War, Hore was on the streets of Bengal, seeing and sketching the pains of the poor suffering human beings and animals. **Not only war, but the British-made Bengal famine of 1943 took the humanist in this artist to the streets and the struggling people of the region.**

Lithograph Teacher



the other side of war: calamity and inhumanness. With the advent of colonialism, two streams of thought emerged in the social sphere, and both have had global perspectives. While one has perceived the enhancement of power and amplification of resources, the other has seen the possibility of embezzlement and inhuman trade practices. They correspond to each other. Even these days, the above two work hand in glove in our societies in the same fashion.

In those days of famine and war, Chittaprosad Bhattacharya and Zainul Abedin in Bengal were activist artists who, with their humanist feelings, moved among the people who had been fighting against imperialism and colonialism. Lines and forms were their tools to communicate reality and to spread the awareness of viciousness prevailing in society.

The adherence of the landed gentry to the powered classes and their support to suppress all struggles for freedom and equality were the issues these artists took up in their works. Hore also joined in their artistic as well as political activities inspired by Marxism and socialism.

Somnath Hore's works exhibited at Arthshila, Shantiniketan



9th Symphony, 1983



Pex Lumina 3 (C) 2022

Yes, it was colonialism that drove the idea of internationalism, but the same also gave birth to nationalism and the ideology of fighting against exploitation.

Further, the alienation felt by the proletariat due to mechanisation and industrialisation made ordinary workers aware of their individuality and social backwardness. Unlike the collective societies of the pre-colonial cultural milieu that had a common goal limited to a specific location and lifestyle, imperialism divided and distanced people physically and mentally.

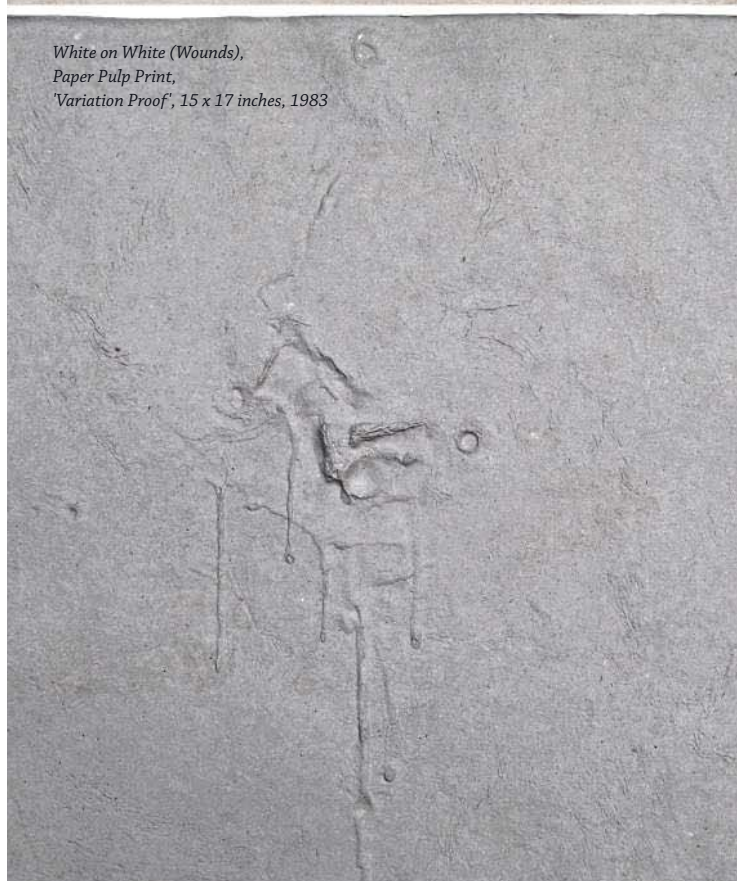
Losing the values of social bonding based on the belief systems that kept the societies together generated a spiritual vacuum everywhere. However, it enabled people to critically evaluate their predicaments. Thus, an emotional response to the realities around has become a norm for these artists who never succumbed to any preconditioned ideas about what art is. It was a direct, unmediated response to the political issues and life around that formulated the lines and figures of their works.

What has been imprinted in his mind in his youthful days is what Hore has imprinted on his works. Hore was deeply affected by the sharply defined lines of pain, hunger, helplessness, struggles and catastrophe that personified human beings and animals. Never in his life, he could erase those marks and lines from his mind, and recurrently he expressed them to expose the social exploitation and the pains suffered by the poor. For him, pain and suffering were the concrete aspects of life. And he saw a varied range of wounds that generate and sustain pains of life in society.

Whatever he saw around reminded him of the pathos and tragic elements of life. Therefore, he felt no discomfort in transforming those emotive and painful forms in his artworks. That means, he never considered art as an



Untitled,
Woodcut print on rice paper



White on White (Wounds),
Paper Pulp Print,
'Variation Proof', 15 x 17 inches, 1983

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expression of beauty. Instead, he treated it as a social tool that works in society as a cultural component. In a way, it was also a strong denial of seeing art as a commodity by emphasising its cultural role.

Interestingly, as one can observe, he hardly did any works of interiors except a few in his Thebaga series. But, in the Thebaga works the human beings sit in the interiors of the hut and discuss the course of their movement. They demanded one-third of the produce from the farms for the peasants. Such meetings inside the huts were for political work to be done among the people outside. No walls deterring humanity were allowed by the artist in his works.

Out in the open, out in nature, on the streets and fields, there are human beings who live a life,

those who realise the cause of their sufferings and dare to struggle against it. They were the source of his forms and inspiration; not the bright-coloured interiors of the retarded wealthy.

Right from his youthful activist days, Hore was searching for a visual language that speaks of the subaltern, a boldly expressive and unadorned manner of image-rendering that delineates the life of woeful human beings and their minds. It was an alternative art of the subaltern that could correspond to the lexes of subalternity the artist was looking for.

As an artist, Hore was very clear that his oeuvre is revolving around a single theme: pain. He stated, "I work around the one concept, the one I have called 'wounds'. If the viewer only perceives a single-minded concentration on the subject but a lack of aesthetics, then one can only conclude that the work is of no worth. It will be cast into the rubbish bins of the future because through the pains of the present alter, the artist's aesthetic revelation will carry on" (Somnath Hore, 'My Concept of Art', Seagull Books, Calcutta 2009).

If love can be a sustained theme and expression for centuries in art why can't pain be? Other than drawings and printmaking, Hore pursued the art of sculpting with equal passion and involvement. The small sculptures which he called 'bronzes' also emerged from the same aesthetic philosophy and the visual language which he steadfastly followed all the years.

The tubular and concave forms of the human figurines with the folds, cuts and hollows speak volumes about human suffering and pain. In other words, they emerge as concrete forms of abstract feelings of pain. In turn, they take the shape of abstract forms of the concrete feelings that the viewer gets from the sinuous and roughened edges of the material that make the figurine works of art.

One can also observe how the sculptor tries to evoke bare, emotional and real situations of the downtrodden or the outcast just by leaving the welding marks in the sculptures as they are. No polishing, no covering, no beautification. They are as they are, stark and stubborn.

Hore never minced his forms.



Neena Jospeh
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BOOK
REVIEW

Pax Lumina 3(5) / 2022 / 60 - 61

THE DEVASTATING IMPACT OF GLOBAL HUNGER

The book, 'Betting on Famine' by Jean Ziegler, deals with the subject of hunger. It talks about freedom from hunger. This is a human right. It is needed for the survival of life and dignified human existence. Through 29 chapters, spread over six parts in 336 pages, the author portrays facts with appropriate examples and reveals the pattern and trend of global hunger and its devastating impact.

Ziegler states how the world has become conscious and conscientious about the subject of hunger. As a result, concepts, such as the right to food, have emerged through declarations, conventions, and international associations such as the Food and Agriculture Organisation (FAO). It has set up projects such as the World Food Programme.

Ziegler examines why the international institutions, whose very *raison d'être* is guaranteeing food security, have become ineffectual. He brings to light the culprits who are responsible for robbing vulnerable human beings of their right to food. The author depicts how the profit-mongering of international trade services and the predatory nature of globalised capitalism have neutralised many initiatives to eradicate hunger from the face of the earth.

Written in French, it has been translated by Christopher Caines and published by The New

Ziegler's description of death by hunger as **murder and famine as massacre powerfully conveys the message that hunger is avoidable.**



Press, New York in 2013. Ziegler's experience as a professor of sociology in Geneva, the vice president of the Advisory Committee to the United Nations Human Rights Council and as the UN Special Rapporteur on the Right to Food, lend ethos to the work.

Though not deeply analysed, Ziegler, who took eight years to write the book, has been able to present credible statistics from authentic sources along with stories from across the globe.

When he writes that 'every five seconds, a child under the age of ten dies of hunger' on this earth, which, in turn, has an agricultural system adequate to feed twice the world population, it makes us realise the faultlines that exist in the systems and structures.



Why the World Still Goes Hungry
Food vs Fuel and the Global Hunger Crisis



Ziegler's description of death by hunger as murder and famine as massacre powerfully conveys the message that hunger is avoidable. The persons occupying responsible positions are erring by their unjust actions or the omission of appropriate actions.

The book offers many important nuggets of information such as the hunger plan of Hitler whereby Jews were subjected to starvation deaths in the concentration camps, the unfair trading practices such as advance trading and the lack of critical agricultural inputs, including timely credit.

He also notes the lack of warehousing, agricultural implements, land, irrigation, transportation and road facilities. Other topics included the loss of livelihood of farmers through land grabbing and the replacement of staple food with crops depending on the dictates of the capitalists.

There is a graphic description of what happens to a person due to food deprivation over days, the irreversible stunting undergone by children, and the impact on pregnant women. Then there is the practice of women and girls getting leftover food after the men and boys have eaten.

Ziegler points out how by considering the deprivation of macronutrients alone and not that of micronutrients, crucial aspects of hunger become invisible. He describes how hunger becomes glaringly visible during disasters- both human made and natural. He is able to paint a realistic picture of feminisation of hunger with examples, such as women and girls having to go without food in some African countries, in case nothing is left over after the male family members eat, where custom demands that females can eat only after the males have done with.

Starvation deaths in Niger, weaponisation of hunger of the Palestinians in Gaza strip and the hunger deaths of the repatriated refugees (who crossed borders to Manchuria, China) in North Korea are poignantly portrayed along with the utter helplessness of UN authorities. The narration of the children who are born in Crateus, Brazil and who die within a few weeks due to foetal malnutrition is heart wrenching. The pernicious disease of hunger, NOMA which horrendously disfigure children is conveyed along with the neglect of this disease by WHO and pharmaceutical giants. The deprivation of food in Nazi camps, in the ghettoized Gaza strip and camps of North Korea are painted vividly.

The 18th/19th century Malthusian theory of hunger as being natural, fatalistic and necessary for common good was enthusiastically embraced by the powers to be and it served them well to conveniently escape from the guilt of inaction against this 'murder and massacre'. In tune with the 20th century values of human rights, the author succeeds in reiterating that hunger is a human rights issue which demands concrete action. Hunger is human made and hence eradicable. The book offers pointers for action to all key players.

The contents will be useful for students, teachers and researchers of any social science branch considering that the social sciences are interdisciplinary. One can understand the dynamics of hunger and its long-term and intergenerational ramifications.

Policymakers and politicians need to have a deep understanding of this subject. The book gives the message that beyond charity-based approaches, the permanent solution lies in structural and systemic corrections. The youth of the world need to have a deeper understanding of how exactly the systems work and how they can function to deliver the results for which it is designed. Hence, this easily comprehensible and interesting book qualifies for a very wide readership.

However, a new edition including updated statistics and facts is strongly recommended.

Dr. Neena Joseph is the former Professor at the Institute of Management in Government, Kerala, India

LETTERS TO THE EDITOR

Pax Lumina 3(5) / 2022 / 62

Dear Editor,

Congratulations! Yet another excellent and enlightening issue on the *Global Economic Imbalances and the Poor*. May we be enlightened and awakened.

Vernon D’Cunha, Rome

Dear Editor,

I was deeply delighted to read July 2022 issue of *Pax Lumina* featuring the global economic imbalances brought about mainly by war and violence. The articles have brought to light how the world, irrespective of the economic status of the countries, were hard hit by the recession. It is unfortunate to see that the defense budget of various nations are disproportionately hiked curtailing welfare measures. It is high time the world leaders took strategic decisions to safeguard the life and welfare of the people especially the poor.

Jefferson, New Jersey, USA.

Dear Editor,

Thanks for the e-magazine. It is such a wonderful issue.

Best regards,

Suvendu Chatterjee, Kolkata

Dear Editor,

Thank you for sharing the latest issue of *Pax Lumina* which is so interesting.

Best regards,

Chantal Mansour, Lebanon



Dear Editor,

Thank you for the latest issue of *Pax Lumina*. As an educator, I have always got inspiration from every Issue of *Pax Lumina*. It has always helped me in exposing my children to different perspectives.

Yours sincerely,

Shruthi H., Trivandrum

Dear Editor,

Thank you for the latest issue of *Pax Lumina*. It is very interesting to read the contents which are worth a treasure.

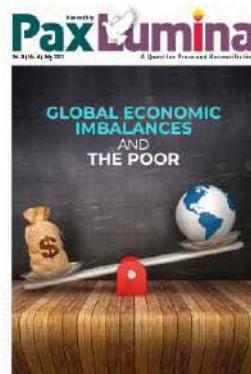
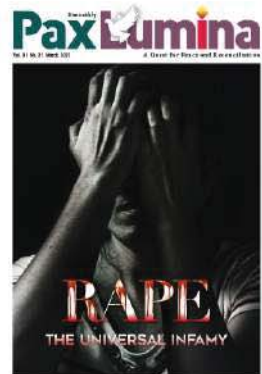
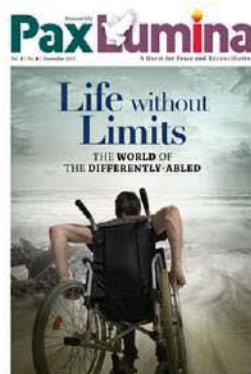
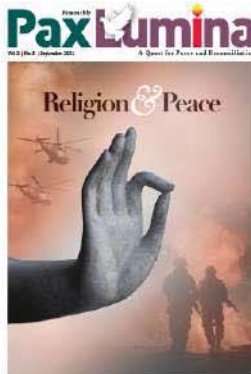
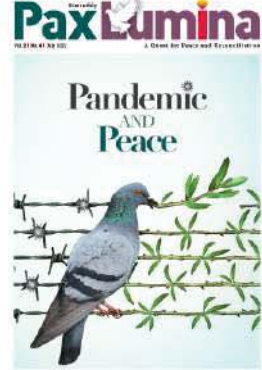
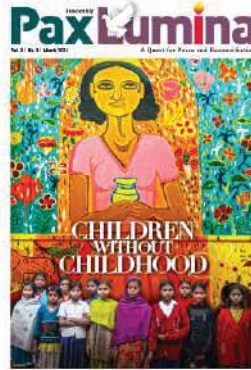
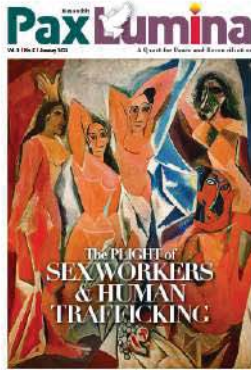
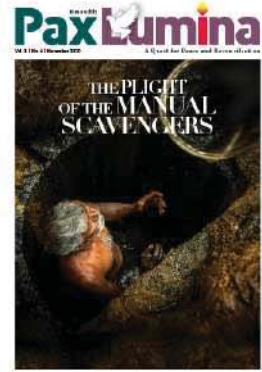
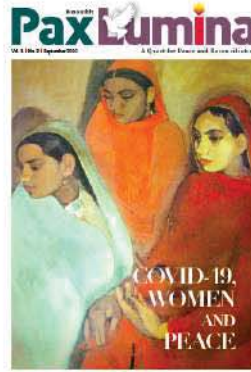
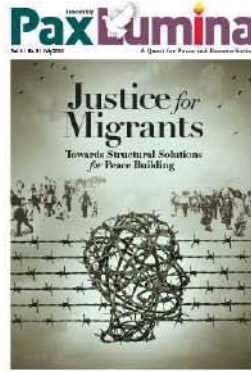
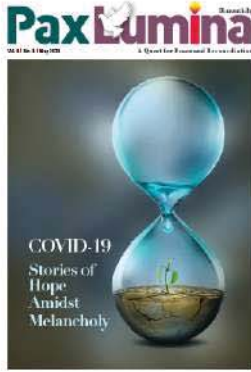
Warm regards,

Debasis Gupta, Kolkata

Dear Editor,

I've enjoyed *Pax Lumina* for the first time I read an issue.

Miguel Farias, Oxford



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