



Nepal's growing dependency on food imports: A threat to national sovereignty and ways forward

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Abstract

Nepal's food imports are growing at an alarming rate. Recent reports suggest a 65% jump in the imports of the key agricultural products between 2015 to 2020. It signals not only the growing dependency trends but also raises serious questions about the future of the agricultural sector in the country--a potential threat to national security and sovereignty. While the topic receives regular media coverage, rarely examined are the historical contexts and the socio-economic, (geo)-political, and cultural drivers of the growing dependency on food imports. Using a political economy approach, we take a systematic look at the food production and import trajectories along with a set of historically important internal and external factors affecting Nepal's food systems. The main objective of this paper is to examine how Nepal became a net food importer in recent decades and discuss some potential ways forward. We argue that while the sharp rise in food imports is unprecedented for Nepal's historically agriculture-based economy, it is hardly surprising in a globalized world; it is emblematic of the global decline of subsistence agriculture in the face of the wider market economy. We conclude that the changes in Nepal's food production and import trajectories are largely influenced by four key interconnected endogenous and exogenous drivers: 1) the politics of modernization and economic growth affecting the agriculture and food systems, 2) regional geopolitics and increasing economic/market dependence, 3) ineffective government policies on food production and imports, and 4) political instability and insurgency forcing migration and off-farm incomes.

Keywords: agriculture; food import-export; dependency; food security; food sovereignty; political-economy and policies

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1. Introduction

There is a growing recognition that Nepal is becoming a country dependent on the food imports to meet its domestic demand. The irony is that Nepal is historically known for its agriculture-based economy, and yet, the food import is growing at an alarming rate in recent years. Recent media reports suggest a 65% jump in the import of key agricultural products between 2015/16 to 2019/2020 (Prasain, 2020). In the 2020 fiscal year alone, the country imported agricultural products worth Nepali Rs 243 billion, out of which NRs 79 billion was for food commodities and the rice import was 75% of the total food imports (Himal Khabar, 2021). These media reports certainly signal Nepal's growing dependency trends, but these also raise serious questions about the future of agricultural sector in the country, which potentially could pose a threat to the national security and sovereignty. While the topic itself receives regular media coverage, rarely examined are the historical contexts and the socio-economic, political, and cultural drivers of the growing dependency on the food imports.

This paper examines the issue of a growing dependency on the food import in Nepal. As social scientists who have closely observed and studied Nepal's agriculture and food systems for decades, we believe that this case is not just concerning, but it is also exemplifying a bigger picture of the changes in agriculture and food systems occurring at the global scale. In this paper, we argue that the sharp rise in the food import of the last decades is unprecedented and troubling, given Nepal's historically agriculture-based economy. However, Nepal's growing dependency on the food imports is hardly surprising in a globalized world; it is emblematic of the global decline of subsistence agriculture due to the penetration of the wider market economy into rural life. To support our main thesis, we apply a political economy approach that takes temporal and spatial perspectives: 1) to systematically study the current state of agriculture and food productions and imports in Nepal, and 2) to analyze a set of historically important internal and external factors affecting Nepal's agriculture and food production systems. The main objective of the paper is to illustrate how Nepal turned into a net food importer within the last few decades despite the agriculture-based economy and discuss some potential ways forward, mainly the lessons learned from other comparable countries.

In the following sections, this paper will first examine the status and the meaning of troubling scenarios of food import, followed by the detailed discussions on the historical trends and their socio-economic, cultural, and political drivers. We particularly elaborate on the historical facts and drivers of the changes in food production and distribution as well as larger agricultural systems in Nepal, specifically looking into three key interconnected drivers: 1) the politics of economic growth (or modernization) affecting the agriculture and food systems, 2) regional geopolitics and increasing economic/market dependence, 3) ineffective government policies on food production and import, and 4) political instability and insurgency forcing migration and off-farm incomes. This paper will then provide some insights and lessons from other countries and recommend a set of ways forward for Nepal.

2. Status of food imports and some troubling scenarios

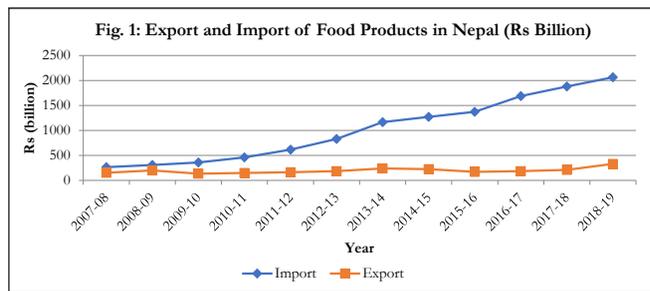
Nepal is currently in a paradoxical position in terms of economic development. A large majority of the population is engaged in agriculture, and yet, this sector's contribution to national gross domestic product (GDP) is declining fast. In 2019/20, the agriculture sector

contributed 27.7 % to the GDP of about \$22 billion as compared to 37.1% in 2010/11 (MoF 2020: 67). In 2008, the agriculture sector employed 73.9% of the population, but this number declined to 60.4% in 2018 (CBS 2008, 2018). In contrast, the non-agriculture sector contributed about 72.3% to the GDP in 2019/20, of which only about 13% came from the industrial sector and the rest (about 60%) came from the service sector. It is widely believed that the growth in the service sector has been possible because of the growing remittances from migrant workers working in foreign countries (e.g., Gulf countries, Malaysia). This is supported by the fact that by 2018/2019, about 3.2 million Nepali became migrant workers (CBS 2018/2019). From 2008/09 to 2018/19, the government of Nepal (GoN) issued over 4 million labour permits to work in foreign countries--except in India where work permits are exempted per the Nepal-India Peace and Friendship Treaty of 1950. The total remittance from these migrant workers constituted NRs 879.3 billion (about \$8.79 billions) in 2018/19, which is over a quarter of national GDP (GoN/MoLESS, 2020: p3). Most of the remittance income is believed to be spent on foods, consumer goods, education, health, and some real estate purchases.

Although the import of food started to increase in the early 1990s, the dependence on food import has been growing alarmingly in the two decades. Ramesh Kumar writes in a popular weekly Nepali Times:

“A typical urban Nepali kitchen is globalised these days: there is rice grown in India, soybeans from the United States, the garlic is from Shandong in China, the chilies are Vietnamese. Vegetables are cooked in soybean oil from as far away as Paraguay, the small cardamom is from Guatemala and even the dal lentil is from Tanzania. Other food essentials could be from Australia, Ukraine, Indonesia, or Argentina. Even staples like rice and dal, vegetables, and spices are not likely to be home grown. Despite this growing dependency on food imports, Nepal still officially describes itself as an agriculture-based economy (Kumar, 2020)”.

This is no exaggeration. It captures the household experience in rapidly changing Nepal—more urbanized and “modern” but heavily dependent on imports for domestic consumption. Food grains like rice, wheat flour and lentils even in remote villages that used to be once domestically supplied are now largely reliant upon imports from India. As shown in Figure 1,

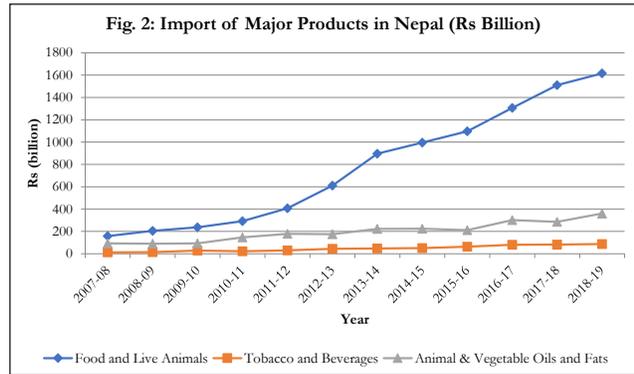


Data source: Economic Survey (2019/20. p.72 Annex)

food imports have been constantly rising in the last two decades. In 2007/08, the trade deficit in food products in Nepal was NRs 11 billion, but it increased to Rs 173 billion in 2018/19, which is the 16 times increase in about a decade. In 2018/19, Nepal imported about 14 million MT of cereals (e.g., rice, maize, and wheat), but exported almost none. Kumar (2020) further writes “Nepal is now importing 80% of the grain it consumes, and spending on food imports has increased 62% in the last five years (Kumar, 2020). Similar trends are reported in the

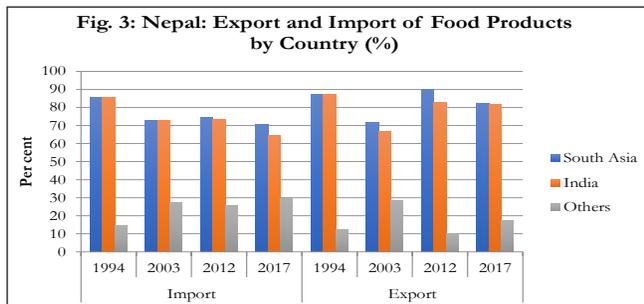
imports of other food products, meat and fish, tea/coffee, and spices” (Prasain 2019).

Importing some agricultural commodities to meet the domestic demand has become a common practice in a globalized economy; however, it can be a serious issue when the export from the country stays stagnant or declines while the imports jump at an alarming rate—it grows the country’s dependency on foreign countries and could potentially create nonmilitary threats to national security and sovereignty (Fullbrook, 2010). In the case of



Data source: Economic Survey (2019/20, p.72 Annex)

Nepal, its trade deficit in food products has increased rapidly since the early 2010s (Fig 1). More importantly, the imports of “food and live animals” have grown significantly in this



Data source: Calculated based on data available on ‘World Integrated Trade Solutions’ (https://wits.worldbank.org/CountryProfile/en/Country/NPL/Year/2017/TradeFlow/EXPIMP/Partner/all/Product/16-24_FoodProd).

period, even though the imports of “tobacco and beverages” and “animal and vegetable fats and oils” are relatively flat (Fig 2). Nepal has a smaller export portfolio, mainly selling some commodities, mainly soyabean and vegetable oil, to India. However, the trade deficit with India has been constantly growing, particularly in agricultural commodities and consumer goods (see Fig 3).

Pandey and colleagues (2014) argue that the 1996 Trade Treaty between India and Nepal boosted India as the major trading partner of Nepal. Among the six agricultural commodities included in the study (i.e., jute, pulses, spices, wheat, tea, and fresh vegetables), India is reported to have competitive advantage in all export commodities, including jute—a major export of Nepal to India in the past. Even in pulses and tea, in which Nepal has more suitable climatic conditions, Nepal continues to see a decline in both production and export for a variety of reasons. The decline in pulses or lentils, which is a prerequisite to Nepal’s staple diet of *Dal-Bhat*, and a major source of protein for the people, especially poor, Nepal is alarming. A recent study confirms the constant decline in lentil productivity and total volume, mostly owing to crop failures caused by climate variability, modest yields, and low levels of profitability (Paudel et al 2020). Until recently, Nepal was one of the world’s top producers of lentils – it was the seventh biggest producer of lentils in the world in 2018, producing almost 250,000 MT (Joshi, 2020). Until 2014, Nepal exported lentils, especially to Bangladesh and it had continued despite low yields compared to other countries. In recent years, however, both India and Bangladesh

have prioritized lentils, and have provided subsidies and support to farmers, which have boosted productivity (Joshi, 2020) and increased export volumes. Nepal started importing lentils around 2015, as domestic production was not keeping up with the domestic demand.

Two areas in which Nepal has increased domestic production in recent years are poultry and vegetables. In these two areas too, Nepal continues to rely on imports for animal feeds and seeds. As a result, the import of maize is growing high and about 60% of which is used in poultry feed. In recent years, maize worth Rs 12 billion is being imported annually, and most of it is imported from India (Guragain, 2019). The growing dependence on these agricultural inputs is also of significant concern. This trend is true in agriculture production as well. In 2020, the GoN faced a serious public backlash for its inability to import a large amount of chemical fertilizer from foreign companies. As illustrated in Table 1, the demand for pesticides started to increase steadily from 2012/13 to 2016/17, and almost all of those were fulfilled by imported and/or formulated. This is representative of a growing trend of dependence on imports in the agricultural sector in Nepal. The growing imports of seeds, chemical fertilizers, pesticides, machinery equipment, and in some cases farm laborers from India only add more to the ever increasing and already complex dependency on food imports.

Table 1: Pesticides Imported and Formulated in Nepal (2012 – 2017)

Year	Pesticides	Liquid a.i. (Kg)	Solid a. i. (Kg)
2012/2013	Insecticides	99607.42	39154.24
	Fungicides	319.6	163571.2
	Herbicides	97025.02	3808.26
2013/2014	Insecticides	123799.24	38526.76
	Fungicides	7290.63	184913
	Herbicides	76355.65	13771.34
2014/15	Insecticides	117314.52	38727.41
	Fungicides	782.52	250025.32
	Herbicides	118391.43	15465.95
2015/16	Insecticides	140277.18	40993.69
	Fungicides	727.92	246747.35
	Herbicides	113598.03	20634.34
2016/17	Insecticides	122713.17	46646.83
	Fungicides	1651.25	346055.97
	Herbicides	70357.13	35088.31

(Source: CBS 2019)

As alarming as these food import facts are, these are not ahistorical; these can be explained well by closely examining the historical roots and contexts of Nepal’s agriculture and food production systems that the economic relations and networks at a regional scale, especially with India with which Nepal shares an open border and close socio-economic and cultural ties. In fact, every aspect of Nepal’s current agriculture and food systems is linked to the economic

and trade policies with India, and hence, is influenced by the agricultural and economic policies of India. These changes started to happen mainly after the restoration of democracy in the 1990s, which among other things, also saw the rise in trade between the two countries. This trend only accelerated in the 2000s and 2010s.

3. Historical trends and their drivers

3.1 The politics of modernization and economic growth affecting the agriculture and food systems

Although food import is growing rapidly in recent decades, Nepal has faced issues and challenges in food production and security throughout history. For most Nepali, life has always been hard, and yet, country overall was largely self-sufficient in food production. The problem was of course with the feudalistic food distribution or uneven access to food, coercive measures of the state, and exploitative agrarian structure (Adhikari and Bohle, 1999), which kept the agricultural sector focused on stability and sustenance of the feudalistic structure for much of Nepal's history. There have been three major historical milestones in Nepal's political and economic history since 1950 when the country embraced democratic governance after disposing of the autocratic Rana regime. Dividing Nepal's historical timelines into three time periods—all representing historically the most significant political and economic changes in the country—is helpful in describing the changes seen in Nepal's agriculture and food systems

3.1.1 The pre-1950 period of feudalistic nationalism in Nepali agriculture

Food sufficiency has historically been part of the economic self-reliance mantra of Nepali nationalism. King Pratap Malla (14th century) checked on every household to make sure enough food supply for a season. King Prithvi Narayan Shah, the founder and uniter of modern Nepal, famously in his Ditya Upadesh preached the economic, cultural, and social self-reliance from the colonial forces. However, the rise of Janga Bahadur Rana as the ruler after a coup and his famous trip to Europe in 1850 set the new era of the “modernization” concept in Nepal, especially with the introduction of mechanical technology from British India and new trade relations between these countries. This “modernization” meant mimicking the western ideals and standards in Nepali irrigation canals, land use classification, revenue records, and taxation policies. The ruler and elites were the direct beneficiaries of this modernization drive, as food supplies to the towns and urban centers were used as a primary tool to retain the regime. One of the main aims of the early public food distribution system in Nepal was to maintain the army and bureaucracy's loyalty to these ruling families (Adhikari and Bohle, 1999). In other words, the Rana regime used western ideals and standards to further the feudalistic control over food systems.

During this period, several famines and hunger were reported in the region, mainly the 1900 and 1943 famines in India (Mukerjee, 2013). In contrast, Nepal did not suffer the way India did. Nepal managed to be food self-sufficient at the country level, even though the inequality and food shortage existed in many parts of the country. It is interesting that Nepal had in fact supplied food grains to the Bengal famines as a gift to support people, and Nepal's Tarai also received refugees from India. Damodaran writes “many of the surviving peasants in Purnea migrated to Nepal where the state was less confiscatory than the East India Company” (Damodaran, 2007: p148). This was also coincided with the Rana ruler parceling out Tarai land

to those close to the power through *birta* (a land grant to individuals) and opening the frontier land for resettlement of the hill migrants with the hope of raising revenue from land resources. The Rana regime's plan hit the major road block; it was the malaria infestation in the Tarai jungles, which created reluctance among the potential hill migrants. Many Nepalis instead migrated to the hills of northeastern India like Assam, Darjeeling, and Sikkim. Some fled because of coercive labour required for the unification process (Caplan, 1970; Nakane, 1966) while others were forced to work, often without wages or food support, for the state and for the ruling class (e.g., supporting armed service with transportation, carrying mails, and supplies and building palaces, temples, forts).

All in all, much of the Rana regime's machinery centered on extending their rule and the centralization of resource extortion to benefit the ruling class. The Rana regime was so self-serving that they provided British colonial interests with access to Nepal's forest resources, people (mercenary army) and trade—all in return for the revenues to maintain the regime and acquiring luxury goods from the colonial centers. Gurkha soldiers fought on behalf of the British regime in two World Wars and several other smaller wars. Historians argue that Nepal faced a severe shortage of labour in the hills and mountains, while thousands of Nepalis sacrificed their lives to protect the British empire (Onta, 2016; Ahmadzadeh, 2017). Although much is unknown about the direct and indirect impacts of this form of labor migration on Nepal's agriculture, it is safe to argue that the absence of able-bodied men in the household meant women had to shoulder the burden of running households and worse, caring for disabled family members.

3.1.2 The 1950-1990 period of modernization and development interventions

After the fall of the Rana Regime in 1950, Nepal underwent some transformative changes in political and economic policies, which in turn, profoundly influenced the agricultural sector. Nepal formally opened to the outside world and diplomatic ties with western countries were formally established. Largely influenced by the western industrialization ideas, Nepal became a recipient of the “modern development” ideas and interventions, and agriculture development was the primary target. The western donors like the USA leveraged its financial resources and strategic interest to play a leading role in the modernization of state machinery, particularly in agricultural production, land management, and natural resource extraction. The government in partnership with the US agencies organized the first conference to develop the agriculture sector in 1958, which clearly portrayed a gradual decline of agricultural outputs and eventual collapse of subsistence farming systems in Nepal. Referencing a large-scale migration of seasonal workers from Nepal to neighboring countries, the agricultural minister opined at the conference:

“Those who are compelled to leave their birthplaces to seek livelihood outside their country spend the most valuable periods of their lives making other's homes prosperous. Once they are physically disabled, weak, and disease-ridden, do they return to their homeland? In this condition, they can no longer work for themselves or the country. They remain hungry and thirsty. We have to solve these problems by adopting various measures to improve agricultural productivity” (Dahal, 1997: p150).

Thus began the massive migration and resettlement plans in Tarai. With the help of the US Mission to Nepal (later the USAID), malaria was eradicated using DDT, which paved the way

for resettlement projects (Robertson, 2018) and eventually helped Nepal acquire more fertile land to produce more food while reducing the population pressure in the hills. The government also attempted to address the unequal agrarian structure through a land reform program in the late 1950s. The western countries, mainly the USA (through the Ford Foundation), were keen to pursue this project, not as a matter of social justice but were mostly driven by the Cold War era fear of the communist uprising sweeping through Asia, often triggered by rampant inequality and food shortage. The issue of land reform, unfortunately, raised alarm among the wealthy landlords connected with the military and the ruling families, who later supported the royal coup of 1960 and helped dispose of the democratically elected government that was attempting land reform and agricultural change. In later years, land reform was implemented as a populist agenda but did not result in any fruitful outcome, as evident with the Land Reform Act 1964, which could only appropriate about 1.5 % of the surplus land (Adhikari, 2009).

Since the mid-1970s, there was a growing push for adopting new mechanization technologies modelled after the Green Revolution success in India (see Section 3.2) and promoting monoculture of agricultural commodities suitable for the market. As a result, a culture of buying food from the market rather than solely relying on subsistence farming became a step toward modernization—a symbol of progress or *bikash* (Pigg, 1992; Shrestha, 1997). As Berry (1977) cautioned in the case of agricultural change happening in the US, agriculture as a way of life was also changed to “agri-business” to be done by few people in larger farms, farming for higher profit rather than better health and better food.

3.1.3 The post-1990 period of economic liberalization and market-driven agricultural policies

Another major milestone in Nepal’s political and economic history was the 1989-1990 period when the democracy restoration movement forced the king to accept multi-party democratic system. In this period, Nepal also adopted economic reform policies—in the form of deregulation and expansion of market economy—pushed by the donor agencies in Nepal, which was mirrored other low-income countries worldwide. The immediate economic impacts were obviously felt in the agriculture and food systems, mainly the privatization of national industries and public corporations directly and indirectly connected with agricultural commodities (e.g., jute, sugarcane, tobacco, fertilizer). Beyond the privatization, economic liberalization policies also enhanced market access for business communities of Nepal and India. Through this process, Nepal started to see subsistence agriculture as the barrier to the modernization, but soon fell into the trap of being dependent on India for meeting domestic demands.

One major turning was the 1996 Trade Treaty with India, which only intensified Nepal’s economic ties with the market networks of India (Pandey et. al., 2014). First, there was a big bump in the investments in Nepal from Indian companies (e.g., Dabur, Colgate-Palmolive) which enabled Indian brands to directly access Nepali raw materials as well as the market. Besides creating new market opportunities for Indian companies in Nepal, this period of economic liberalization also brought major shifts in the flow of consumer goods, including food and agricultural commodities in Nepal (e.g., food grains, oil, seeds, fertilizer). All these changes were occurring while the country was attempting some major policy changes in the

agricultural sector, essentially promoting “market-driven” agricultural development policies (e.g., Agricultural Perspective Plan of 1995) and subsequent policies driving the agricultural value-chain model, in which subsistence agriculture is seen as a barrier to modernization. Cumulative effects were unfavorable to Nepali subsistence farmers, and subsistence farming started to be perceived as impractical and obsolete in the face of a rising production cost and cheaper alternatives flooded from the Indian market network.

The restoration of democracy also meant individual freedom. Unlike the Panchayat period when individual’s freedom and foreign trips were restricted, the new political change allowed individuals to freely move about anywhere in the country and could easily get a passport to travel abroad. While foreign travel itself was not a new phenomenon—some Nepalis traveled abroad before (e.g., British Gurkha), Nepali youth population was soon attracted to employments in foreign countries (e.g., Gulf countries, Japan, Korea, Malaysia). This triggered an exodus of youth labor from farming to off-farm employment abroad, which resulted in the abandonment of distant cultivated lands (Khanal et. al., 2006) and growing competition for prime, irrigated lands in the valleys and those near the markets (Shrestha, 2014). Unlike the remittance from the British Gurkha regiments employment, the remittance sent by these workers was no longer being reinvested in agriculture, since the migration to urban areas in search of a more comfortable life (education and health access) accelerated and more households became dependent on the market for household consumption. As the reliance on the market for food and consumer goods increased, so did the competitive advantage of India in supplying foods and other household goods. By the 1990s, India was rebounding with higher productivity and volume in agricultural commodities, mainly riding on the success of the Green Revolution and favorable policies and support from the government in the agricultural sector. India’s competitive advantage simply overwhelmed Nepal.

3.2 Regional geopolitics and economic relations

Rebounding from several historic famines and food shortage issues, India successfully innovated and implemented the Green Revolution from the early 1960s, which helped India achieve a surplus in food production by the late 1980s. Although there were several downsides (e.g., environmental impacts, growing inequality), the Green Revolution managed to increase domestic production of food grain from 83 million tons in 1960-61 to 252.7 million tons in 2014-15; the Yield rate of all cereals increased from 710 kg/ha in 1960-61 to 1734 kg/ha in 2001-02 (Chaudhary, 2017: p107 and p110). It has reached a new height that India now has a problem in surplus grain management (RBI, 2020). Expanding the market network for the agricultural commodities in foreign markets was an obvious choice and the 1996 Trade Treaty between India and Nepal was just part of the broader strategies of India. Interestingly, while India thrived in the success of higher productivity of their agricultural commodities, Nepal reversed the role of being a net food exporter to a net food importer within this period (Adhikari, 2021). The situation that Nepal is facing now in terms of food imports is akin to what India had faced until the 1960s.

The main foundation of the Green Revolution was technological innovations, but it would not have been possible with the sustained support from the government to the farmers in the forms of subsidies and guaranteed purchase with minimum support price, which played a crucial role in making farmers produce more volume and make the country surplus in food-

grain. This worked well for India for the most part, but the cracks are beginning to show as India itself is attempting to lessen the government's role in a more market-driven economic liberalization of its agriculture sector. The farmer's resistance in the late 2020 and early 2021 (which is still going on as of writing this article on 8th April 2021) is a response to the Indian government's attempt to deregulate and reduce its active role in the management of agricultural markets.

Table 2: Production, availability and consumption of cereals in Nepal
(‘000 Mt., annual average in five yearly period, except 2001 and 2002)

Year	Production	Import	Export	Net import as % of availability	Consumption	Per capita Consumption (Kg)
1971-75	2809	4	166	-6.5	2029	157.8
1976-80	2812	14	60	-1.7	2272	159.3
1981-85	3186	50	45	0.1	2701	169.9
1986-90	4083	41	10	0.7	3422	192.0
1990-95	4478	45	2	0.9	3805	190.6
1996-00	5361	89	23	1.3	4198	187.7
2001	5733	55	12	0.7	4662	193.8
2002	5839	38	10	0.5	4773	193.9

Source: Pyakuryal, B., YB Thapa and D. Roy. 2005. Trade Liberalization and Food Security in Nepal. MITT Discussion Paper No 88. IFPRI, Washington DC. Table 3, page 6.

Table 2 shows the situation in the agricultural sector from the 1970s to early 2000s. The data clearly shows that Nepal exported more food than imported until the early 1980s. It started to become a net importer of food (cereals) from the early 1980s. But, until 2002, the import was only marginal – remaining at most just 1.3% of the available food. But, as Figures 1-3 show, the import accelerated since 2008. These data pertain to only cereals. Nepal started to import other food products as it became more connected to the world market after 1990. It should also be noted that there is an increase in per capita (calorie) food consumption, with a significant rise in the demand for foods in urban centers, and much of this is met with the increased supply from the market networks linked to India.

As we discussed earlier, Nepal's agricultural sector—just like the larger economy—is closely linked to what happens in India. Nepal too followed the footsteps of the Green Revolution inspired the modernization of agriculture, but Nepal could neither provide necessary policy and infrastructure support nor could completely transition away from subsistence agriculture. Besides, the mountainous landscape makes it challenging to implement the key parts of the Green Revolution (e.g., abundant supply of irrigation and agricultural inputs, large farms practicing monoculture, mechanization of agriculture). More importantly, Nepal simply could not compete with the kind of volume produced in India nor could it see its competitive advantage areas (e.g., high value and low volume crops, specialization of commodities unique or suitable to mountain environments). Much of Nepal's modernization of agriculture push

mimicked India and focused on the major grains like rice, wheat, and maize—all the commodities in which India simply outcompeted Nepal in both productivity and volume. The cost of production in Nepal remained high as compared to India, and with the open border and mainly free trade also means that Indian agricultural commodities became readily available in Nepal. This trend accelerated in the late 1990s, as Nepal's political turmoil began to take a toll on the labor force and the entire economy.

3.3 Political instability, insurgency, and youth migration

The multi-party democratic system established in 1990 faced a major setback after the country went through frequent government changes and political rifts, which eventually led to political instability and a decade-long insurgency headed by the Communist Party of Nepal (Maoists) between 1996 and 2006. Cashing on the frustrations of common Nepalis had with the constant political turmoil of the 1990s, the Maoists promised a revolutionary rhetoric: scientific agriculture and land reform, as one of the major political agendas behind the armed conflict with the GoN. However, their scientific agricultural reform ideas remain elusive even when they led the government on multiple occasions.

The most devastating impact of the Maoist insurgency was visible in the agriculture and food systems of Nepal. First, the private investment in farming started to significantly decline due to the insurgency. A study by Uprety, Ghale, and KC (2016) finds “the Maoist rebels in their stronghold areas evicted local landlords, captured their lands, and distributed them to landless people. Hence, local owners were not able to invest in agriculture and kept their land barren. Those who received the redistributed land were not able to cultivate it due to fear of the security forces. Consequently, already scarce land resources were underutilized” (p.166). Many of the Maoists confiscated lands were also underutilized because those receiving the land also feared reprisals from the government police and army. Just to illustrate this complicated nexus, let's take an example from far-western Nepal, from where the insurgency had begun. When a landowner Jayalal Bam of Khin VDC-3 of Kalikot district asked a *dalit* (lower caste) family to vacate the land that was given to them for use by the Maoists, the Maoists cadres murdered him. The police then arrested 15 dalits in connection with this murder. Eventually, these dalits who were promised the land were handed life imprisonments. Such cases happened all over the country.

Secondly, the Maoist insurgency also created major barriers in the marketing of agricultural products, damaged agricultural market infrastructures, disturbed regular hat-bazaars, and above all, exerted a sense of fear and insecurity with the rise in extortion of food and money. To simply put, the Maoists managed to disturb and destroy the existing structures easily, but never managed to demonstrate anything that would resemble their political agendas related to scientific agriculture and land reform. For instance, the CPN (Maoists) had initiated some 50 communes and co-operatives in their stronghold districts like Rolpa, Rukum and Jajarkot. These communes/cooperatives, however, did not make headways, as the Maoists were also confused whether to convert co-operatives into communes or vice-versa. Similarly, the constant extortion harassment by the Maoists to the entrepreneurs and innovative farmers forced them out of their villages and towns to cities for safety and livelihoods. The overall impact was a decline in agriculture and a perceived notion of farming as a backward occupation. Those who remained in farming were not able to move out of poverty. For example, the Living Standard

Survey NLSS) in 2003/04 revealed these facts and a report based on the NLSS I (1995/96) and NLSS II (2003/04) indicated that those who transition to the non-farm sector and those in foreign labor employment were able to move out of poverty (CBS, 2006). As the agriculture sector deteriorated, food imports started to rise.

Lastly, the most direct and profound result of the Maoist insurgency was the forced migration, which directly hit the self-reliance norms of Nepali societies. The forced migration was not only limited to the wealthy families and the landowners, but also the young adults of the poor family who would often find themselves between the Maoist cadres and the security forces. Many joined the Maoists for a variety of reasons, while others left the village in search of employment in the cities and abroad. This trend only exacerbated already surging youth migration. These converging factors are important in explaining why and how Nepali experienced explosive urban growth in several cities and towns in the last two decades (Ishtiaque et. al., 2017; Rimal, 2018), and how the country started to increasingly rely on remittance to sustain its economy and the food imports for its domestic consumption. The numbers from the last two decades' food import trends only show the tip of the iceberg; socio-cultural changes tied to food systems occurring at the grassroots level show even more troubling scenarios.

3.4 Changing socio-cultural values associated with food systems

When the country depends heavily on remittance and does not see much prospect in subsistence agriculture, it is natural for the people to see growing consumption as part of “modernization” and devalue the labor-intensive subsistence agriculture. In Nepal, coarse grain crops (e.g., millet, barley, buckwheat, maize) have historically been the main staples for those living in hills and mountains. These crops suited well to the agroclimatic conditions of the mountain environments, mainly rain-fed agriculture, short growing season, lower external input requirements, and less labor-intensive. These coarse grains are not only rich in nutritional value but are also resilient to climatic variations. However, those were slowly displaced by the “rice culture,” as the latter is widely perceived to be superior food consumed by the elites. In the past, the lowlander people working for the government in these hilly regions established ‘white rice’ as a superior food. They forced local people to keep ‘white rice’ for the purpose of feeding government officials (Adhikari, 2008). The social status attached to rice played an important role in its growing appeal among those who wanted to be presented as “modern” to the elites. After all, most agricultural policies of Nepal consistently supported rice, wheat, and maize as the main agricultural commodities. This is not an isolated case of Nepal. There is a global level change in dietary patterns because of the supply of cereals like wheat from industrialized countries to food-importing developing countries at the expense of locally grown crops like cassava, sorghum, or millet, and forcing local farmers out of the market (Hoering, 2013: p5).

A parallel trend of importation and consumption of globalized imported food, which has become a status symbol of the urban populations, is the trend of devaluing local foods. As the reliance on local foods is seen as a symbol of backwardness and subsistence farming as underdevelopment, subsistence food production is declining heavily leading to the import of so-called superior foods. This new trend has also led to a downgrading of the social status of farming as an occupation. Society, in general, now looks down upon the youth engaged in farming – a backward and drudgery-filled occupation to be shunned by the educated. In his

recent book ‘Kogle’, Prem Bahadur Bohra from Dolpa, describes how he was ridiculed in the school as a man to eat ‘Kogle’—local maize-based porridge. He writes that people eating local foods were considered inferior to those consuming rice—a status symbol among the upper class. This attitude toward local food items has been expanding all over the Karnali region (Adhikari, 2008) along with the growing activities of development agencies and NGOs. The Karnali region is massively shifting toward food-aid dependency leading to the abandonment of local food and local food culture. The young generation is systematically forgetting the traditional knowledge of the food that could be gathered in the forest and pastures, and of the value of such local foods.

3.5 Recent agricultural policies and the consideration of food sovereignty and wellbeing concepts

It would be an exaggeration to claim that the sole focus of Nepal’s agricultural policies so far has been on the increased per capita yield and volume than the quality and environmentally friendly outputs. What is more striking is that these agricultural policies are influenced by the Green Revolution ideals, but the level of sustained support needed from the government—in credit, irrigation, price support, subsidies, agricultural extension, and importantly, competitive market—is falling short in almost all fronts. Consequently, these agricultural policies are driven so much by the lofty economic gain ideals that not much attention has been paid to the barriers and constraints faced by the small farmers to get fair price for their products in the market that is controlled by the network of actors (e.g., merchants, contractors, dealers) that has more to be gained from pushing the cheaper consumer goods flooded from India.

One of the major limitations of the market-driven agricultural policies is its failure to recognize the enormous geographic and biocultural diversity that exists within the country. Although subsistence agriculture is known for its higher labor drudgery and lower yield, this system relied exclusively on the adaptive capacity of local communities to manage their labor in producing fresh and healthy food with very low ecological footprints and conserving both indigenous varieties and the cultures that sustained them for generations. Choosing higher yield and productivity unfortunately came at the price of losing agricultural diversity, quality, and skills. No one can tell now whether Nepal can afford to ignore the value of the regenerative nature of subsistence agricultural practices that had adapted to the varied and diverse agricultural settings of Nepal. This argument is also important from the perspectives of “food sovereignty” and “food wellbeing”(see Gartaula et. al., 2017).

The food sovereignty concept came in the wake of flooding cheap food—mostly subsidized by the governments—from the wealthy industrialized nation to South American countries. The dumping of food grains like wheat, rice and maize had destroyed the local farming in these countries causing distress to farmers, and loss of local food and food culture. Via Campesina was instrumental in developing the concept (La Via Campesina, 2003). Starting from 2006, Nepal has been adopting ‘food sovereignty’ as an approach to develop agriculture and make the country self-reliant in food production. The reality, however, is that Nepal has failed to develop any substantive and specific implementation policies to ensure food sovereignty. At present, Nepal’s main agricultural development policy is captured in the *Agricultural Development Strategy* (ADS), which was developed with the backing of the Asian Development Bank and other international donor agencies. It follows basically a market-based approach and use of

inputs that are not produced in the country and is believed that some donors agencies openly advocate for the entry of multinational companies and their control over seeds and agrochemicals. Skeptics argue whether the ADS can serve subsistence farmers well, who constitute 80% of the farm population in Nepal (Roka, 2017). It is seen that whatever subsidies that government gives like in fertilizers, it is taken up mainly by a few of the larger farmers (Hiroyuki, 2019).

4. Lessons from other countries and current challenges

One need not go far back to know how dependence on food import could lead to. As recent as 2008, when there was the global financial crisis, countries dependent on food imports faced 'food riots.' These included Haiti, Guinea, Mauritania, Mexico, Morocco, Egypt, Senegal, Uzbekistan, Yemen, Bangladesh, the Philippines, and Indonesia (Mukerjee, 2013 quoting Jayati Ghosh). In Pakistan and Thailand, troops had to be deployed to guard food stocks and prevent the seizure of grain from warehouses. The price of food rose because of use of grains in ethanol production in developed countries. Some companies like Goldman Sachs stocked the food and sold food at high prices (Kaufman, 2011). Nepal did not suffer much because until then Nepal was largely sufficient in basic food like cereals, and people did not experience the problem. If this had happened as of now, it would have led to a problem. In this instance, we may also recall the trade ban from India in 1990 and 2015. In 1990, no one noticed the problem of food or other things (except petroleum products) and that had no consequences except for Kathmandu. Whereas by 2015, Nepal's dependence on India for food and petroleum products including gas had tremendously increased, and this had caused severe consequences in Kathmandu and other cities within a short time of the ban.

Taking the case of countries which suffered during the 2008 financial crisis, the common thing among them was the 'dependence on food import'. Haiti was largely food self-sufficient in staple rice until the 1980s, but then International Monetary Fund (IMF) imposed a structural adjustment program that led to the reduction in tariff on rice from 35% to 3% to qualify for a loan (Hoering, 2013). Cheap rice imports from the USA (it became cheap because of subsidies) led to the decimation of domestic rice production. By the middle of 2008, when international rice prices soared by more than three times since early 2007, Haiti was importing most of its staple. This same situation applies to other countries as well. A report adds further:

"Food imports itself are nothing negative. But the experience shows that imports of basic foods, on which many people and especially poor people depend, can become "a weapon". This is what India experienced in the 1960s, when the USA withheld food deliveries under the programme PL 480 for political reasons, or Southern Africa in 2002, when the US insisted to send GM-maize as food aids" (Hoering, 2013: p4).

The conversion of land from staple food production to cash crops for the short-term high profit also caused the food crisis in various countries. Free-market economists argue that with ample earnings from high-value exports, poor countries could buy cheap foreign grain to feed their people. This has also been a suggestion made to Nepal by international donor agencies, and Nepal reduced its budget for agricultural development thinking that it is easy to buy cheap food than product itself. Yet, there is no guarantee that there will always be a high price for the cash crops or that the price of staple food remains low forever. The private institutions,

including international big corporations, could manipulate the price for their own benefits. At present, cheap cereal grains (produced through highly mechanized methods with subsidies from the government) have been flowing from developed countries (food-exporting countries like USA, Canada, Australia) to developing countries, and whatever developing countries export are mainly cash crops, sometimes for luxury products and consumption. If the prices of basic staples increase like in the financial crisis of 2008, poor people in developing countries lose out as they cannot afford even the basic food, and their own luxury cash crop production may not be useful for food (Hoering, 2013). This has led to the food crisis in various African countries. Until now, Nepal has been producing some cereals and could withstand few months if there is a ban on food export from other countries. However, this ability has been declining fast, which could lead to problems faced in for example Haiti and other African countries.

5. Conclusions

The sharp rise in Nepal's food imports in the last two decades should certainly concern Nepali policymakers, scientists, farmers, and alike. This trend has historical roots in a set of interconnected and complex socio-economic, cultural, and political drivers that had not been fully and systematically explored. As we argued in this paper, this trend is mainly an outcome of the political instability and failed government policies on food production and import, which are influenced by larger socio-economic and cultural changes conditioned by free market economy, urbanization, youth migration, and consumerism.

This trend of growing food imports, however, is not unprecedented or even surprising, given the fact that many countries like Nepal are currently facing similar challenges, albeit to different degrees; these countries have historically relied on subsistence agriculture but embraced the wider market economy without any adequate preparation (e.g., infrastructure, credit, extension support, the value of unique places) and could not be competitive. In a globalized world, where agricultural commodities are increasingly tele-connected, countries like Nepal will have to reexamine these endogenous and exogenous factors that have constrained their ability to be competitive. Above all, these countries have failed to recognize that the food sovereignty and wellbeing ideas have been the core principle of the national food production and import policies of the industrialized and emerging economies. It is time for Nepal to reimagine its regenerative agriculture for food production and distribution systems.

Lastly, we are not suggesting a retreat to the romanticized “old ways” but only emphasizing a set of the lessons learned from some of the unique and salient features of Nepali agricultural practices that sustained Nepali farmers for generations despite unequal and exploitative societal structure. By doing so could enable Nepali farmers to thrive with place-based, high-value agricultural entrepreneurship that are not as homogenized as the kind of agricultural commodities and business practices promoted by the green revolution-based technologies; those have higher demands for external inputs (e.g., fertilizer, irrigation, seeds, pesticides), which are out of reach for most Nepali farmers. In this perspective, we recommend the following broad policy measures:

- More investments in the agriculture sector to facilitate innovative solutions based on local resources that improve both production and productivity and help Nepal achieve a higher level of multiplier impacts within the country.

- Incentivize farmers to follow diversity in food systems and retain the regenerative agriculture practices
- Provide farmers easier access to critical infrastructures like transportation, irrigation, and market access and information.
- Protect farming against the vagaries of the market and supporting them through insurance in case of loss and guaranteed purchase of their produce at the minimum support price.
- Mainstream the food sovereignty and wellbeing ideas as the core part of Nepali food production and import policies.

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