

# Status of Agricultural Stagnation in Nepalese Economy: A Descriptive Analysis

# Bishnu Bahadur Khatri<sup>1</sup> and Tirtha Raj Timsina<sup>2</sup>

<sup>1</sup>Central Department of Rural Development, Tribhuvan University, Kathmandu, Nepal <sup>2</sup>Bhaktapur Multiple Campus, Tribhuvan University, Bhaktapur, Nepal Email: tirtha.timsina2@gmail.com https://orcid.org/0000-0003-4777-1307 DOI: 10.3126/nutaj.v10i1-2.62827

### **Abstract**

Agriculture contributes as a means of survival for more than half of the total population in Nepal, the production and productivity of the sector have remained stagnant during the recent years. In this connection, the aim of this research paper is to find out the current status and causes of agricultural stagnation in Nepal. This is a review based descriptive research paper having quantitative information. Secondary data are used to accumulate the information and describe the result depending on the research objective. The result of this paper revealed that some factors such as technological backwardness, absentee landlords, migration, and attraction of the youth for remittance income abroad are responsible for agricultural stagnation. Mitigation of such factors through the intensification and modernization for agricultural transformation is well accepted measure to enhance agricultural outcomes and resolve the problem of agricultural stagnation.

Keywords: Agriculture, migration, outcomes, remittance, stagnation, transformation

#### Introduction

The term agriculture refers to the activities that are intended for doing something to produce something in the cultivable field which is connected with the fulfillment of human needs. Gunnar Myrdal noted that "it is in the agricultural sector that the battle for long-term economic development will be won or lost." Similarly, the significance of the agriculture sector was largely emphasized by the famous economist William Arther Lewis in 1954 in his essay "Economic Development with Unlimited Supply of Labour" as an integral part of industrial expansion by supplying food in minimum price and surplus labour from the sector. The Merriam-Webster dictionary defines agriculture as an art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees preparation and marketing of the resulting products. The backwardness of any least developed countries are formally connected with the export based trade even if they are not merely strong in agricultural productivity. However, the achievement of emerging South-Asian countries namely; Hong Kong, Taiwan, South Korea and Singapore are fortunate to secure the remarkable share of world market because of technological progress and the efforts of its producers to seek potential market (Kaldor & Kaldor, 1996). Lekhi (2005) argued that agriculture is an important segment of traditional (feudal) economy,

the transformation from feudalism to capitalism necessarily implies a transformation of agriculture. It is viewed that agriculture has been thought to play only the supportive or passive role in the past and just to provide sufficient low-priced food and manpower to the industrial sector (Todaro and Smith 2020). However, the supply of food grain for human beings and fundamental basis for commercial farming and animal husbandry as the integral part of industrial development globally must not be underestimated.

Before agriculture became widespread, people spent most of their lives searching for food—hunting wild animals and gathering wild plants. About 11,500 years ago, people gradually learned how to grow cereal and root crops, and settled down to a life based on farming (National Geography, n. d.). It is viewed that economic development initially originated with the growth in the agriculture in the sense that it simultaneously provides food grain to poor people and contribute for industrial growth as a source of inputs. The majority of the world's poor still lives in rural areas and depends crucially on agriculture for their livelihoods. Hence, an increase in agricultural productivity should raise incomes in agriculture. This alone will not necessarily help the poor (Bruinsma, 2015). A Famous Economist Simon Kuznets identified four different contributions of agriculture in economic development; namely: the product contribution; the foreign exchange contribution (through agricultural export); the market contribution (rising demand through rural income) and the factor market contribution (labour and capital) (Todaro and Smith, 2020).

Agricultural stagnation is fundamental basis for counterbalancing population growth and resource expansion by which the crisis would emerge as a response of food shortages and declined labour productivity that is what the prediction of Malthusian theory (Ashraf & Galor, 2011). It is well asserted that agriculture is one of the fundamental component of entire economic growth even the proportion vary from country to country, and the stagnant nature of agriculture eventually disrupt the overall economic progress. The Unified growth theory stressed that the transition from stagnation to economic growth is inevitable for economic development for which human capital formation along with technological process have ultimate importance to accelerate production process (Galor, 2005; Campante et al., 2021).

Nassif et al. (2020) in an article identified that overall economic stagnation in Brazilian economy are caused by misleading economic policies and depressed labour productivity. The agricultural stagnation is said to be the outcome of poverty and lack of motivation to workers in the agriculture sector and even the disparity of prices between agricultural and industrial products (Kuznetsova et al., 2018). Wiesmeier et al. (2015), in the study of Central and Northern Europe have concluded that the agricultural stagnation is largely caused by the agricultural mismanagement and climate change mainly since 1990. The loss of soil organic carbon and the growing use of chemical fertilizer instead of organic fertilizer are more responsible. Therefore, interdisciplinary investigation and comprehensive monitoring would be the way to cope with such adversity in coming days. It is clearly viewed that the decade long civil conflict of Nepal in the past has even triggered as a result of agricultural stagnation along with ownership inequalities and uneven development (Deraniyagala, 2005).

An empirical study of Ghana; an African country, revealed that a gradual move from traditional farming to agricultural intensification through the growing use of labour saving technologies with growing population, market access and changing rural lifestyles instead of land-saving mechanism that

is actually contrasted with Asian path of Green Revolution. Such practices have shown the dynamism that occurred in African agricultural practices which departed from the pre-existing stagnation narratives of agricultural transformation (Houssou et al., 2018).

Although the Nepalese agriculture tends to be stagnant in last few years, it does not mean that there is no any measures to handle. Mechanization could be an effective tool to improve agronomic practices that leads to reorganized soil fertility (Gupta, 2018). As mentioned by Kannan and Pushpangadan (2018), agricultural stagnation is thus the technological stagnation even if there are some technical changes such as increased mixed cropping, intensive land use, networks with agricultural research and development.

It is argued that because of growing population, rising diary and meet consumption along with the growth in the use of biofuel, there will have dramatic pressure on global agriculture in coming decades whereas there have been noticeable yield stagnation in the major crops like; maize, rice and wheat as these three crops occupies almost 57 per cent of global agricultural calories. However, there are some high performing regions having continued increasing crop yield along with the underperforming regions with remarkable decline an agricultural yield (Roy et al., 2012).

Growth in agriculture remains in general two to three times more effective at reducing poverty than an equivalent amount of growth generated in other sectors. It is viewed in the sense that the intensity of the majority rural poor are largely unable to escape out from the less than enough subsistence based occupation in most of the underdeveloped societies. The degree of tradability of the food (and nonfood) that experiences the increase in productivity is an important consideration in determining the reduction of poverty from growth in that sector. The effects of agriculture on poverty reduction are largest for the poorest in society and the advantage of agricultural over nonagricultural growth in reducing poverty ultimately disappears as countries become richer (Christiansen & Martin, 2018).

Generally, agricultural development involves increase in productivity which is possible either through new techniques of production, or through productivity enhancing infrastructure and human capital investments. Agricultural growth and mechanisms applied for massive production eventually alleviate rural and urban poverty and make a sustained base for economic development. There are direct as well as indirect ways in which agricultural development can contribute to poverty alleviation. The direct way involves direct improvement in the incomes of the rural poor, through adoption of improved techniques, or increases in the productivity of their agricultural assets such as land which is possible through agriculture-related research, and extension, as well as agriculture related infrastructure investments, such as irrigation, and rural electrification. On the other hand, adoption of new technique lead the increased income of poor farmers along with technique facilitates additional investment and facilitates more income and so on (Sarris, 2001).

Agriculture would be the best possible way through which pro-poor development is accessible and hence country can achieve sustained economic growth. However, Perkins et.al (2013) noted that, in case of developing countries, a large number of agricultural activities do not enter to the market. Much of what the real farmers produced is agricultural sector is consumed by the farm household themselves and never entered into the market system. In real sense, those are the real and seriously underestimate a nation's GDP (Perkins et.al, 2013). It is viewed that the key to end extreme poverty is to enable the poorest of the poor to get their foot on the ladders of development. Furthermore, the extreme poor lack

the following six types of capital. They are: Human capital, Business capital, Infrastructure capital, Natural capital, Public institutional capital and Knowledge capital (Sachs, 2005 p. 245). However, the status of agriculture with compare to the rest of the other sectors remains constant and even declining to the national account during the last more than a decade period whereas the contribution of service sectors dramatically increased. For instance; agriculture used to contribute more than 33 per cent in 2012 which remain only about 24 per cent of national GDP. This figure not only shows the declining trend but also demonstrate the growing stagnation of Nepalese agriculture sector that eventually affect inversely to the balance of payment situation of the country.

Recent statistics regarding agriculture production and productivity does not display the satisfactory result in Nepal even if the government has lead serious effort to move in the right track. The fundamental reason behind the agricultural stagnation is caused by the lack of attraction of majority youth who treat agriculture as a marginal occupation and even the agricultural families in the rural areas often prefer foreign employment for basic livelihood. Furthermore, rapid unplanned fragmentation of productive land in urban, semi-urban and most of the Terai regions are commonly viewed as another detrimental factor. The government of Nepal has developed many different policies through which the agriculture along with forestry and animal husbandry can go hand in hand so that this sector can contribute for poverty reduction and economic development. Some of the exemplary policy basis for agriculture that can contribute to poverty reduction and economic development are discussed hereafter. The Constitution of Nepal-2072BS has adopted the policy of prioritizing economically deprived people of all genders, regions, and communities while providing social security and social justice (Government of Nepal, 2015).

For the past two decades, Nepal has been implementing poverty alleviation programs as prioritized development efforts. In the Tenth Plan, poverty was divided into three broad dimensions, namely, income-based poverty, human poverty, and social exclusion. Currently, more than 50 poverty alleviation programs are under implementation. Today, the population below the poverty line is 18.7 per cent, the multidimensional poverty index is 28.6 per cent and the human development index is 0.579 (MoF, 2022). By the end of the 15th periodic planning period, the population below the absolute poverty line will have come down from 18.7 per cent to 9.5 per cent, and the population relying under Multidimensional poverty will reach from existing 28.6 per cent to 11.5 Per cent (NPC, 2020).

The Agriculture Development Strategy (ADS) is a national sectoral strategy of Nepal for the period 2015-2035. The overall objective of the ADS includes five dimensions of increased food and nutrition security, poverty reduction, competitiveness, higher and more equitable income of rural households, and strengthened farmers' rights. ADS 2015-2035, 20 years perspective strategies has envisioned the sustained, broad based and inclusive agricultural growth to ensure the poverty reduction and economic development of Nepal (MoAD, n. d.).

The Constitution of Nepal 2015 guarantees the right to food as a fundamental right. Considering food and nutrition crises that may arise due to various reasons, policy, structural and institutional reforms are needed in agriculture for self-reliance in the production of major staples, fruits, vegetables, and fish and meat products (NPC, 2020).

Since Nepal is said to be a better land for agriculture production, the existing trend of land use does not depicts the optimism in the sense that there has not been found any remarkable growth in a land use

as well as agricultural productivity in this country. Different studies revealed that the growing trend of land abandonment inversely influenced the agricultural stagnation in Nepal. Pyakurel (2021) pointed out that abandoning the arable land is a common problem for all provinces of Nepal. The situation is more serious in most of the hilly districts roughly estimated to be 20 to 40 Per cent of total arable land of this region. The causes behind which may be due to the less preference of youth in the sectors and the lack of productive land holding by the real farmers which is estimated to be around 25 percent of the total farmers in the country. Among others, the declining trend of agricultural production are pointed as due to the climate change, lack of irrigation, supply of enough fertilizers and good market accessibilities too.

Timilsina et al. (2019) identified that there are multiple factors responsible for declining trend of agro production like; migration, real-estate business, and an increment in land use for off-farm activities are the dominant responsible for changing cropping pattern of this country. Even if some crops show growing production in the country does not contribute for food security and employment in the country, these are limited and work as incentives to purchasing imported commodities. To address such inappropriate land use practices and agricultural stagnation, Government of Nepal has put forded the Land Use policy, 2015 with objective of proper land use management in new administrative structure in federal system (Ministry of Land Reform and Management, 2015) and Land Use Policy, 2019. However, the proper implementation has always been in question. Along with this, the poor land management practices have considerable inverse impact in this sector that can only be addressed by taking urgent step by responsible sectors to reverse the condition so that land use and productivity would have sustainable outcome in future. Similarly, the issue of mismanagement and low productivity emerged as chronic in most of the Terai areas as a result of rampant urbanization and land fragmentation during last two and half decades is a major constraint to attain food security in the country. Therefore, visualizing the current situation and finding out the basic constraints that contributes the prolonged backwardness and searching the measure to address them are really challenging and burning issue. There are many research and publication to dig out the problem of agriculture in Nepalese economy. However, searching the specific problems that impede agriculture productivity and sluggish the contribution to national GDP has not been made properly. In this scenario, the aim of this research paper is to examine the major causes of agricultural stagnation and finding out the potential measures in case of Nepal.

### Materials and methods

This study entitled 'Status of Agricultural Stagnation in the Nepalese Economy,' has employed a research methodology characterized by a descriptive research design. This design has focused on evaluating the current state of sluggish agricultural growth that further aggravates stagnant agriculture in the context of Nepalese economy. The research heavily relies on secondary data sources, obtained through a comprehensive literature search and subsequent analysis. These secondary data sources consist of a diverse range of scholarly articles, government reports, academic publications, statistical databases, and authoritative books. The selection of these sources is based on rigorous inclusion criteria, which prioritize the relevance of the material to the research topic, the timeliness of the publication, and the credibility and authenticity of the source. The rigorous methodology of data selection ensures that the information used is both up-to-date and taken from reputable and reliable sources (Khatri & Pasa,

2023). The research procedure is supported by a data exploration and retrieval approach, incorporating online databases such as JSTOR, Google Scholar, ResearchGate, and government websites like the Ministry of Agriculture and Local Development (MoALD), Government of Nepal. The qualitative as well as quantitative information obtained from Nepal government websites are triangulated with the other published databases available in different scholarly publications so that the result is valid so far.

# Results and discussion

Since, agriculture occupies two third per cent of total population in the country, Nepalese agriculture has gradually been deteriorates in recent years. As a result, agricultural productivity remains more or less stagnant and even falling although various efforts have been made by the public as well as private sectors.

## Results

The study revealed that status of Nepalese agriculture remains stable in nature and even declining because of multiple factors. The recent land distribution of Nepal are presented in the table below.

**Table 1**Current land use pattern of Nepal

Category	Area (000 Hectares)	Percent (%)		
Agricultural land cultivated	3,091	21.00		
Agricultural land uncultivated	1,030	7.00		
Forest	4,268	29.00		
Shrub land	1,560	10.60		
Grass land and pasture	1,766	12.00		
Water	383	2.60		
Others	2,620	17.80		
Total	14,718	100.00		

Source: MoALD, 2022

Table 1 shows that although the share of agriculture in overall GDP declining and literally shift to the service sectors over the last few years, whereas the share of livestock, forestry and fishery contribute a good amount of agricultural income in national account. Therefore, there is still some noticeable prospects of agricultural development in Nepal. The overall structure of land distribution for entire sectors can also be shown by the help of chart below:

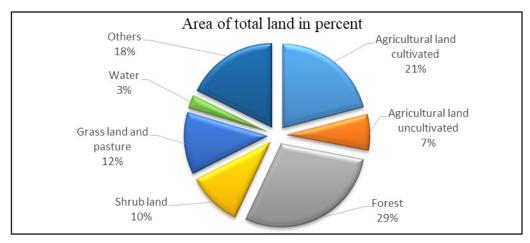


Figure 1: Current land distribution in Nepal

Figure 1 depicts entire distribution of land in various sectors in the country. It demonstrate that there is potentiality of agricultural growth if the uncultivated land are used appropriately.

## GDP Contribution of agriculture in Nepalese economy in last ten years

The recent economic survey published by ministry of finance MoF (2080BS) and MoALD (2023) asserted that the contribution of agriculture has been shrinking for the last few years. More specifically, the contribution of agriculture in national GDP is currently accounted 24.6 per cent which was remained 30.9 per cent in fiscal year 2079/80 BS. The overall contribution and growth rate of GDP as well as annual growth rate of primary sector alone can be shown in the table below:

 Table 2

 Share of agriculture (primary sector) in national GDP during last 10 years

	<i>J U</i>			
	Fiscal Year in BS (AD)	GDP contribution of		Annual growth rate of
_		Primary sector	GDP (in %)	Primary sector (in %)
	2070/71(2013/14)	30.9	5.75	4.61
	2071/72 (2014/15)	30.0	3.51	1.24
	2072/73(2015/16)	29.0	0.00	-0.13
	2073/74(2016/17)	27.4	8.59	5.35
	2074/75(2017/18)	26.2	7.37	2.75
	2075/76(2018/19)	25.6	6.39	5.43
	2076/77(2019/20)	25.6	-2.42	2.32
	2077/78(2020/21)	26.4	4.49	2.85
	2078/79(2021/22)	25.2	5.26	2.39
	2079/80 (2022/23)(P)	24.6	2.16	2.69

Source: MoALD (2023), p. 218; P = Projected

In spite of the fact that there is no good attraction of young generation in agriculture and allied sectors, the contribution of agriculture cannot be underestimated. The table 2 shows that there is

consistent decline in GDP contribution of primary sector along with some countable fluctuation in annual growth rate of GDP as well as primary sectors.

Within the agriculture category, there are different sectors that compose the recent trend of GDP contribution by agriculture and related sectors are shown in the table below:

**Table 3** *Share of agriculture, livestock, forestry and fishery sector in national GDP* 

Sectors	2010/11	2017/18	2018/19	2019/20	2020/21	2021/22(p)
Agriculture	25.02	16.60	16.16	16.51	16.29	15.60
Livestock	6.49	6.25	6.40	6.42	6.40	6.23
Forestry	1.69	2.12	1.97	1.80	1.79	1.68
Fishery	0.25	0.40	0.39	0.43	0.42	0.44
Total	33.45	25.63	24.92	25.16	25.90	23.95

Source: MoALD, 2022.

Table 3 represents last 5 year's GDP contribution of different sectors of primary sector in Nepalese economy. While comparing with the figure of 10 years back in the year 2010/11, there was a good status of agriculture and related sectors. Even if the figure does not display promising result coming through recent years, the contribution of livestock is constant and remarkable in agricultural outcomes by which agriculture stands one of the important sectors of the national output. The overall GDP contribution of different sectors are shown below:

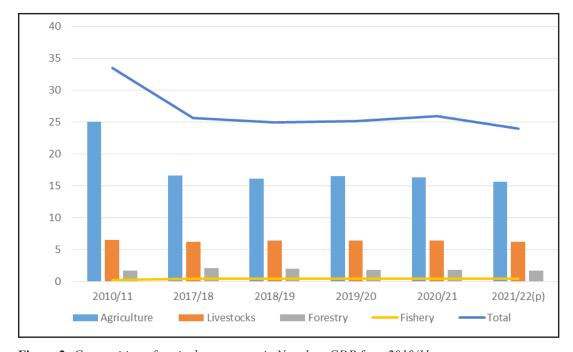


Figure 2: Composition of agriculture sectors in Nepalese GDP from 2010/11 to now

The figure 2 clearly shows that there is a remarkable decline in total agricultural contribution from about 33.5 per cent to 24 per cent during the period of 10 years represented by the line in upper part of the figure, even if we are still continuing the slogan of "Nepal is agriculture dominated economy". The reality is moving away.

# Status of major agricultural production and productivity in Nepal

Nepal has the declining figure of agriculture sectors and the attraction of the young generation as an occupation has not been existing as attractive one. On the other hand the policy provision taken by the federal as well as local level government are unable to attract the youth workforce in the sector. Due to which the recent statistics of agriculture display the declining outcomes. However, we have the great prospects to improve the production of varieties of high value crops and vegetables which are occupying the greater extent of imports of edible commodities from neighboring countries. The area coverage of different types of crops and their aggregate production are given in the table below:

 Table 4

 Current status of agriculture production in Nepal

Name of Crops	Area in Hectare	Production in Mt. tons	Productivity Mt.tons/Hectare	Share in total agri. production		
Food crops	3486249	10772498	3.1	44.3		
Cash crops	457898	3731524	8.1	15.3		
Industrial corps	90817	3198766	35.2	13.2		
Pulses crops	334550	408371	1.2	1.67		
Spice crops	76382	626722	8.2	2.57		
Fruits	129532	1416750	10.9	5.8		
Vegetables	281735	4153157	14.7	17.1		
Honey Hives	248995	5168	0.0	0.021		
Total		24,312,956		100		

Source: MoF, 2022

The table 4 shows different types of crops and their production composition in the country. As shown in the table, food crops occupies about half of the total agriculture production which means the country is still unable to diversity the agro production so that the country con improve its status of production and productivity through which imports can be substitute with high value production and contribute correcting balance of trade and payment. The overall distribution of land area occupied by different crops are shown in the following figure.

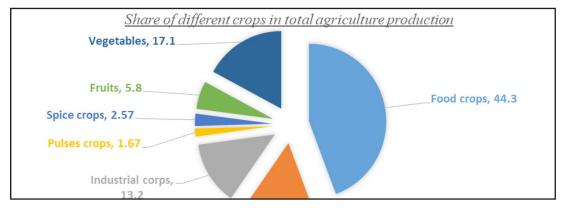
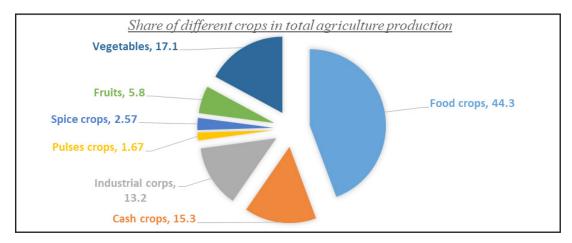


Figure 3: Distribution of land area covered by different crops in Nepal

As given in the table 4 and figure 3, the area occupied by food crops shows about 68 per cent where as its contribution is only 44.3 per cent. On the other hand, vegetables, cash crops and industrial crops that jointly contribute about 45 per cent of total agro production occupies only 16 per cent to total arable land. The given statistics revealed that the crops with greater market value and better prospects with compare to the rest of others does not have enough importance in the country by which the contribution of agriculture in national GDP declined over time. That is how agriculture sector remain stagnant in the country. The overall composition of different crops in total agricultural production are shown in the figure below:



**Figure 4:** Share of different crops in total agricultural production in Nepal

Figure 4 clearly depicts that food crops is the highest contributors of overall agricultural production even if there is no greater attraction of the recent generation. This might be happened because of the inevitability of food crops for public survival. Evan after realizing the true value of other crops except food crops, people are compelled to concentrate primarily on food crops which does not provides good incentives to primary producers and hence they start to search for other alternatives for sustainable livelihood.

# Composition of five major cereal crops production area and annual yield

National statistical accounting system for primary sectors basically includes agriculture, livestock, forestry and fishery as prime sectors out of which food crop being a dominant category among all agricultural production occupies in greater extent. Being more specific, it is better to display the existing trend of major five cereal crops can be taken as representative for entire agricultural production and productivity. Keeping closer look to them, the area covered by and annual average yield per hectare can represent the entire direction of agro production in the country. The overall trend of producible area used and average annual productivity can be shown by the help of table below:

**Table 5** *Major five cereal crops production area and annual yield* 

Area in (000) Hectare and Yield in Mt/Ha.

Fiscal	Paddy		Maize		Millet		Wheat		Barley	
Year	Area	Yield	Area	Yield	Area	Yield	Area	Yield	Area	Yield
2012/13	1420.5	3.17	849.6	2.35	274.35	1.11	759.8	2.48	28.9	1.28
2013/14	1486.9	3.39	928.7	2.46	271.18	1.12	754.4	2.50	28.1	1.24
2014/15	1425.3	3.36	882.3	2.43	268.05	1.15	762.3	2.59	28.1	1.33
2015/16	1362.9	3.15	891.5	2.50	266.79	1.13	745.8	2.33	28.3	1.16
2016/17	1552.4	3.37	900.2	2.55	263.59	1.16	735.8	2.55	27.3	1.11
2017/18	1469.5	3.51	954.1	2.68	263.49	1.19	706.8	2.76	24.6	1.24
2018/19	1491.7	3.76	956.4	2.84	263.26	1.19	703.9	2.85	24.4	1.25
2019/20	1458.9	3.80	957.6	2.96	262.54	1.22	707.5	3.09	24.4	1.28
2020/21	1473.4	3.82	979.7	3.06	265.40	1.23	711.1	2.99	21.8	1.35
2021/22	1477.3	3.47	985.6	3.15	267.1	1.27	716.9	2.99	23.1	1.39

Source: MoALD, 2023

Table 5 depicts the overall trend of area used in thousand hectare and yearly yield of major five cereal crops namely paddy, maize, millet, wheat and barley in terms of metric tons per hectare per year which truly covers almost 80 per cent of the entire food production of the country. It demonstrates the stagnant situation during the period of ten years ranging from fiscal year 2012/13 to fiscal year 2021/22. The statistics clearly show that the area covered by each of the type of crops display the stagnant and even declining figure in last 10 years of period and the yearly yield per hectare also remained stable despite the use of different types of agricultural tools and technology available in surrounding markets. Therefore, the figure gives the greater ground for agricultural transformation and intensification to escape from agricultural stagnation in Nepal.

It is viewed that in recent days the share of agricultural import has remarkably increased which was insignificant in the past. Department of Custom pointed out that the annual import bills have been raising for agricultural product in year on year basis. In an average it has been increasing roughly more than 10 per cent annually. For instance, in fiscal year 2021/22 the agricultural imports accounted as Rs 378.60 billion that was Rs 55 billion more than the previous year which was only Rs 323.66 billion

in 2020/21. In general, the share of expenses on agro products was 19.71 per cent of total import expenditure of Rs. 1.920 trillion in fiscal year 2021/22. On the other hand, the amount of exported agricultural products accounted only of Rs 125.51 billion (Nepal's Import of Agricultural Products, 2022).

### **Discussion**

The entire land use distribution is not evenly divided in different sectors of the economy due to which the contribution of agriculture and allied sectors is not satisfactory. The Statistic show that agricultural land occupies 21 per cent of national territory and even some 7 percent arable land still remain uncultivated. This figure represents that people do not prefer agriculture as a field of attraction due to which still some parts of the productive land remain uncultivated. Similarly, there is less preference of youth in the sectors and the lack of land holding by the real farmers which is estimated to be around 25 per cent of the total farmers in the country. Table 2 represents gradual decline in the contribution of primary sector in national GDP which means agriculture has not been considered as preferred occupation in the country today. The areas covered by forest, shrub and grass land occupies more than half of the total land of Nepal means that there is greater potentiality to promote animal husbandry and related cultivation for the sector which eventually contributes agro productivity.

Production of food crops dominates to the rest of the crops category within the agriculture sector. That means there is no enough focus on high yield crops variety in the country. Although the share of agriculture in overall GDP declining over the last few years, the share of livestock, forestry and fishery contribute a good amount of agricultural output in national account. Evan after realizing the true value of crops other than food crops, people are compelled to reorient primarily on food crops which does not provides good incentives to primary producers.

The issue of mismanagement and low productivity have become chronic in most of the Terai areas as a result of rampant urbanization and land fragmentation during last two and half decades. The productive area coverage of major 5 cereal crops representing entire agricultural crops revealed the fact that, overall there is about 10 per cent decline in agricultural land and per hectare productivity during the period of 10 years means the agricultural stagnation become quite sever and needs to be solved by applying appropriate policy. Due to these alarming facts a serious and specific efforts should made to cope with the changing scenario. As mentioned by Roy et al. (2012), new investment in underperforming regions and the suitable strategies to continue increasing yield in high-performing regions of agriculture is thought to be an urgent need to meet global demand of agricultural products. The literature reviewed and the data shown are the evident to represent the down falling trend of primary sector and hence stagnation of the agriculture in Nepal.

Modernization and intensification of the subsistence based agriculture would be the appropriate way to improve the status and correct the agricultural stagnation of Nepalese agriculture sector. Among various others, the study shows that climate change, lack of irrigation, insufficient fertilizers and poor market accessibilities seems to be pointed as the other detrimental factors for declining trend of agricultural production.

#### Conclusion

Agricultural stagnation in Nepal has been one of the challenging issue of practitioners, policy makers and development discourse. Being one of the major sectors of national economy, it's

contribution for employing more than half of the total population of the country till date should not be underestimated. More specifically, economic development and poverty reduction is largely depends upon the agriculture sector in the sense that majority poor people are fundamentally depends upon the agriculture for survival and hence massive transformation of poor masses obviously shape the structure and the strength of development in developing countries like Nepal. However, various factors relating to the agricultural stagnation reveal the fact that the logic behind the agricultural constraints showing low-yield farming methods, predominance of absentee landlords, subsistence based farming patterns, primitive production techniques, lack of easy and comfortable agricultural credit, modest use of productive fertilizers, unavailability of adequate land holding by actual farmers, lack of incentives to real farm-producers to encourage growth based practices are largely responsible. Similarly, global economic stagnation itself might be the principal factor behind. Therefore, transformation of agriculture is not merely the necessary but the inevitable fact for the overall development in general and rapid growth of rural areas in particular. The reason behind as shown in the data above is because of the declining share of agriculture in national GDP and climbing amount of agricultural imports in the country. In this regard, remarkable importance should be given on the proper allocation and management of infrastructure such as; road, irrigation, electricity, market, credit and many more along with suitable policy measures.

### **Conflicts of interest**

The authors declare no conflict of interest.

#### References

- Ashraf, Q., & Galor, O. (2011). Dynamics and stagnation in the Malthusian epoch. *The American Economic Review*, 101(5), 2003–2041. https://doi.org/10.1257/aer.101.5.2003.
- Bruinsma, J. (2015). Agriculture in poverty alleviation and economic development. *World agriculture: Towards*, 2030, 212-231.
- Campante, F., Sturzenegger, F. and Velasco, A. (2021). *Advanced macroeconomics: An easy guide*. Ch. 10. 'Unified growth theory', pp. 147–158. London: LSE Press. DOI: https://doi.org/10.31389/lsepress.ame.j.
- Christiansen, L. and Martin, W. (July 26, 2018). *Five new insights on how agriculture can help reduct poverty*. https://blogs.worldbank.org/jobs/five-new-insights-how-agriculture-can-help-reduce-poverty.
- Deraniyagala, S. (2005). The political economy of civil conflict in Nepal. *Oxford Development Studies*, 33:1, 47-62, DOI: 10.1080/13600810500099659.
- Galor, O. (2005). From stagnation to growth: unified growth theory. *Handbook of economic growth*, *1*, 171-293.
- Government of Nepal (2015). *The constitution of Nepal*. https://lawcommission.gov.np/en/wp-content/uploads/2021/01/Constitution-of-Nepal.pdf.
- Gupta, A. (2018). Mechanization in Nepalese agriculture: potential knowledge gaps and their significance. 18/03. *SAWTEE Working Paper Series*. Kathmandu.
- Houssou, N., Johnson, M., Kolavalli, S., & Asante-Addo, C. (2018). Changes in Ghanaian farming systems: stagnation or a quiet transformation? *Agriculture and human values*, 35(1), 41-66.
- Kaldor, N., & Kaldor, N. (1996). *Causes of growth and stagnation in the world economy* (pp. 55-70). Cambridge University Press.

- Kannan, K. P., & Pushpangadan, K. (1990). Dissecting agricultural stagnation in Kerala: an analysis across crops, seasons and regions. *Economic and Political Weekly*, 1991-2004.
- Khatri, B. B., & Pasa, R. B. (2023). People's perception on climate change: the context of local and global discourse. *Asian Journal of Population Sciences*, 68-79.
- Kuznetsova, A., Zagirova, Z., & Omarhanova, Z. (2018). Problems of poverty and motivation of workers to labour in the field of agriculture as effects of stagnant economy. doi: 10.36689/uhk/hed/2018-01-051.
- Lekhi R.K. (2005). The economic development and planning. Kalyani Publisher; Tenth Edition.
- Ministry of Agriculture and Local Development (MoALD) (2023). *Statistical information on Nepalese agriculture* 2078/2079 (2021/2022) Government of Nepal.
- Ministry of Agriculture and Local Development (MoALD). (2022). Statistical information on nepalese agriculture 2077/2078(2020/2021).
- Ministry of Finance (MoF). (2022). Economic Survey 2021/22. Kathmandu, Nepal.
- Ministry of Land Reform and Management. (2015). *Land Use Policy 2015*. Ministry of Land Reform and Management, Government of Nepal. https://molcpa.gov.np/downloadfile/land%20 use%20policy\_2015\_1505895657\_1536124080.pdf.
- Nassif, A. Morandi, L. and Feijo C. (2020). Economic development and stagnation in Brazil (1950–2011). *Structural Change and Economic Dynamics* 53, 1-15. https://doi.org/10.1016/j.strueco.2020.01.005.
- National Geography (n.d.). *The art and science of agriculture*. https://education.nationalgeographic.org/resource/agriculture/
- National Planning Commission (NPC). (2020). *The fifteenth plan (fiscal year 2019/20-2023/24*). NPC, Government of Nepal.
- Nepal Agriculture Development Strategy (ADS) 2015 to 2035 (n. d.). https://www.fao.org/faolex/results/details/en/c/LEX-FAOC171433/.
- Nepal's import of agricultural products jumps more than double to around Rs 379 billion in the past seven years. (2022, July 28). *My Republica. https://myrepublica.nagariknetwork.com/news/nepal-s-import-of-agricultural-products-jumps-more-than-double-to-around-rs-379-billion-in-the-past-seven-years/.*
- Perkins, D. H., Radelet, S., Lindauer, D. L. and Block S.A. (2013). *Economics of development. Seventh Edition*. W. W. Norton & Company.
- Pyakurel, D. (Dec. 17, 2021). *Arable land abandonment in Nepal: Mitigation is possible but are the stakeholders ready?* https://english.onlinekhabar.com/arable-land-abandonment-nepal.html.
- Ray, D. K., Ramankutty, N., Mueller, N. D., West, P. C., & Foley, J. A. (2012). Recent patterns of crop yield growth and stagnation. *Nature Communications*, 3(1). doi:10.1038/ncomms2296
- Sarris, A. (2001). *The role of agriculture in economic development and poverty reduction*. The World Bank. Timilsina, R. H., Ojha, G. P., Nepali, P. B. & Tiwari, U. (2019). Agriculture land use in Nepal: prospects and impact on food security. *Journal of Agriculture and Forest University 3*; 1-9.
- Todaro, M. P. and Smith, S. C. (2020). *Economic development (Thirteenth Edition)*. Pearson Education Limited. Wiesmeier, M., Hubner, R. & Kogel-Keabner, I. (2015) Stagnating crop yields: An overlooked risk for the carbon balance of agricultural soils? *Science of the Total Environment*. http://dx.doi.org/10.1016/j.scitotenv.2015.07.064.