Policy challenges in agriculture sector and way forward

From left: Sri Lanka Agriculture Economic Association President Dr. Athula Senaratne, Institute of Policy Studies Executive Director Dr. Saman Kelegama, University of Peradeniya Department of Agriculture Economics and Business Management Senior Lecturer Dr. Parakrama Weligamage and Sri Lanka Agriculture Economic Association Secretary Pradeepa Korale-Gedara at the 10th Annual Research Forum of the Sri Lanka Agricultural Economics

From left: Sri Lanka Agriculture Economic Association President Dr. Athula Senaratne, Institute of Policy Studies Executive Director Dr. Saman Kelegama, University of Peradeniya Department of Agriculture Economics and Business Management Senior Lecturer Dr. Parakrama Weligamage and Sri Lanka Agriculture Economic Association Secretary Pradeepa Korale-Gedara at the 10th Annual Research Forum of the Sri Lanka Agricultural Economics Association

Following is the keynote address (edited version) delivered by Institute of Policy Studies of Sri Lanka (IPS) Executive Director Dr. Saman Kelegama at the 10th Annual Research Forum of the Sri Lanka Agricultural Economics Association, organised in partnership with the Primary Industries and Agriculture Ministries, National Science Foundation and IPS recently.

Sri Lanka witnessed a gradual transformation from a predominantly agricultural economy to a service-based economy during the last four decades. Despite this transformation, agriculture still employs nearly a third of the population and many others' livelihoods are indirectly connected to agriculture. Therefore, the importance of agriculture in the national economy cannot be overemphasized. Here are some thoughts on the evolution of the agricultural economy, role and importance of agriculture sector to the national economy, existing challenges and the way forward.

Evolution of current system of agricultural economy in the country Historically, agriculture used to be the primary livelihood and economic sector in Sri Lanka from the ancient period to the last quarter of the 20th century. The traditional farming system of Sri Lanka has often been described as a subsistent and self-sufficient system based on wetland paddy farming, rain-fed highland chena and home gardens. Wetland paddy and highland chena were systems based on seasonal crops whereas home gardens consisted of both seasonal and perennial crops

The advent of the colonial era in the early 16th century brought significant structural changes to the composition of domestic agriculture. These changes were driven by the trade competition for agricultural commodities among the emerging colonial powers. The major commodities that were in demand in Europe at this era were spice crops such as cinnamon and pepper. The colonial powers competed with each other to get the control of trading of these commodities into their hands. They tried to achieve this by taking the political control of traditional supply areas of such commodities

This led to the invasion of the island by three colonial powers, namely, the Portuguese, Dutch and British. These powers occupied the coastal regions of Sri Lanka for nearly 450 years and they controlled the supply flow of commodities that originated even from the landlocked Kandyan Kingdom in the inland areas. Despite these developments, however, the domestic agriculture based on paddy-chena-home gardens triad remained relatively intact during the Portuguese and Dutch periods, maintaining their subsistence and self-sufficient character. It should be noted that the spice crops that commanded global demand largely originated from a home garden system, introducing a commercial element also to the local farming system.

More drastic changes have been introduced to the system by the British rulers who occupied the entire island since 1815. They developed an export agriculture sector based on large-scale estate plantations, initially of coffee to be followed by tea, rubber and coconut. Starting from 1830s, the British rulers took extensive efforts to promote plantation agriculture through private investments using various policy strategies that had far-reaching consequences. Some of the critical policies were taking control of land through the Crown Land Encroachment Ordinance of 1840 and forced migration of South Indian labourers to work in upcountry estates. Over the years, the plantation sub-sector had become the backbone of the national economy. Simultaneously, the other sub-sectors of agriculture, especially paddy farming, fell into negligence, creating severe deficits in supply of food in the country.

The general policy of the British rulers towards meeting the food needs of the citizens was importing the essential food commodities, a policy enabled by the earnings from the plantation agriculture. This gradually increased Sri Lanka's dependence on food imports, subsequently creating budgetary pressures to the colonial government.

The impacts of the policy of neglecting the food security agriculture were to be faced by the British rulers themselves due to the rising expenditure on the import of food commodities, food scarcities experienced during war periods and growing problem of landless peasantry in the upcountry areas. As an all-inclusive solution for these problems, the government embarked on an ambitious programme of land settlement and irrigation rehabilitation aiming at self-sufficiency in major food products such as paddy

Accordingly, large-scale land colonization programmes were launched to resettle landless peasantry from the wet zone upcountry, in the dry zone low country areas known as ancient Rajarata. This was facilitated by the recommendations of the Land Commission Report in 1927 that led to the establishment of the Land Commissioner's Department. Ironically, this represents a reversal of the land takeover policy initiated by the British rulers about a century ago, forcing them to alienate some 'crown land' thus acquired through the Crown Land Encroachment Ordinance to the descendants of the upcountry peasants victimized by the earlier policy

Initiated in 1930s and pioneered by D.S. Senanayake, then Minister of Agriculture, the irrigated land colonization schemes became the backbone of Sri Lanka's agricultural policy throughout the 20th century. All governments that came to power after independence pursued this policy in a vigorous manner, culminating in the Accelerated Mahaweli Development Programme in 1980s. This effort was further facilitated by the introduction of green revolution technologies from the late 50s that helped to increase the productivity of the colonized land.

This historical account helps to understand the present structure of the agriculture sector as it has evolved over time. Accordingly, Sri Lanka now has around 900,000 hectares of paddy land, a majority of which is located in the dry zone. Around 45 percent of these lands come under major irrigation schemes, 25 percent under minor irrigation and 30 percent under rain-fed. In the same areas, the farmers are engaged in cultivation of other highland food crops such as chilli, onion, vegetables, pulses, tuber crops, maize and other cereals in small extents that amount to a total around 150,000 hectares. These lands, farmers, water supply and relevant institutional facilities can together be identified as food security agriculture, altogether occupying over one million hectares−roughly one sixth of land cover mainly in the dry zone plains of the country.

About 750,000 hectares of lands in wet and intermediate zones are under plantation crops of tea, rubber and coconut. Unlike in the colonial era, a majority of holdings in all three crops is under smallholders and the estate plantations seem to be undergoing a decline. Though this sector is usually identified as export agriculture, it should be noted that a major share of coconut production is now consumed locally. Even though statistics are scarce, over one million hectares of land come under home gardens that cater to both the food security of households as well as export income of the country through supply of products such as pepper, cinnamon, cardamom and clove. Another important feature of home gardens is that they provide a major share of fruits consumed by Sri Lankans.

In addition, a significant number of farmers, a majority of whom are engaged in one or more of the above forms of agriculture, also carry out rearing cattle, poultry and other livestock that also contribute to the food security of the country. This overall classification consists of four major sub-sectors of agriculture, namely, food security sub-sector, plantation crops sub-sector, multi-products home garden agriculture and livestock sub-sector. In the broad definition, even though forestry and fisheries also are taken as sub-sectors of agriculture, they are not taken into account here

Role of agriculture sector in national economy Very often, economists tend to assess the role of agriculture to the national economy using the figures on sectoral contribution to gross domestic product (GDP). This however could create a distorted picture about the true role played by agriculture in the national economy. In the first place, these figures do not take into account subsistence production of agriculture that never comes into the market, which is a significant share of the total production in Sri Lanka. Secondly, some parts of the agricultural value chains that involve value-addition activities such as food processing and agro-based industries, are usually reported under the manufacturing sector. While the standard procedures of national economic accounting cannot be changed, one should keep in mind that the issues arising in these segments can best be addressed by taking them as part of the agricultural value chains where they normally belonged to.

In this respect, a very positive initiative has been taken by the Primary Industries Ministry focussing on value chains development, which is a relatively new approach in Sri Lanka’s policy on agriculture. The IPS itself has focussed on value chain research for quite some time now. Thirdly, these figures do not reflect on livelihood, cultural and social values fulfilled by agriculture, especially in rural societies that still dominate the Sri Lankan society at large.

Keeping these weaknesses also in mind, given below are some macroeconomic figures as indicated by national accounts to examine the comparative performance of the agriculture sector in recent years.

At the time of independence, the role of the agriculture sector in the Sri Lankan economy was quite significant exceeding 60 percent of total GDP. The percentage share of the plantation sector alone in GDP in 1950s was around 37 percent and it had declined to 9 percent by 1970. By 2015, the share of agriculture sector including forestry and fisheries has dropped to 7.85 percent of the total GDP under constant (2010) prices. The plantation sector, which was the leading foreign exchange earner until the mid-80s, was overtaken by foreign employment, garments and tourism, but still plays a significant role by contributing around 2 percent of GDP (2014).

Economists are aware that declining of the relative share of agriculture in GDP is not something for alarm but a reality expected in the development process as shown by the experience of other countries around the world. Empirical literature indicates that a transition from agriculture to industries and services is a global phenomenon experienced across countries. What matters is the growth performance of agriculture as an individual sector. Sri Lanka has recently witnessed a period of impressive growth for the last few years, averaging above 5 percent per annum until 2012.

Looking at the growth of the agriculture sector at the disaggregated level, the recent growth in the sector can largely be attributable to the significant expansion in the production of rice, vegetables, fruits and some animal production. The significant contraction observed in the major plantation crops – tea and rubber, not only dampened the growth in the sector in 2014 and 2015, but also raised serious concerns about the future viability of the plantation industries. Only the coconut production recorded a growth of 5.1 percent from the plantation sector.

Challenges faced by agriculture sector in Sri Lanka The above statistics do not indicate much about the real challenges faced by the agriculture sector. In many ways, the agriculture sector appears to be undergoing a major transformation in nearly all sub-sectors of it. These changes are driven by both external factors relating to the global economy as well as internal dynamics of the sector itself. While some of these factors are responsible for short-term shocks on the system, others appear to be more long-standing and structural. For instance, the export agriculture sector is apparently affected by shocks caused by global economic downturn to a certain extent. However, it is highly uncertain whether plantation agriculture would return to normalcy if the global economy recovers and demand is restored. The reason is that some long-standing structural issues and internal dynamics of the plantation sector also appear to cause troubles in the sector.

Being comprised of a complex system of value chains, the agriculture sector as a whole currently faces several simultaneous challenges that may have short-to long-term repercussions. These can broadly be categorized into four areas, namely: challenges associated with meeting, first, the food security needs of the growing population; second, recovering the growth potential of the export agriculture sub-sector; third, renovation and sustained management of the fragile natural resources bas; and fourth, facing the imminent threat of climate change. A few areas on these challenges are highlighted below.

Meeting food security needs of growing population Many express pride on the fact that Sri Lanka has reached self-sufficiency in rice. This basically implies that rice imports have gone down to a significantly low level compared with the situation of high import dependency in the past. This can of course be considered a commendable achievement since it helped saving a significant share of foreign

exchange earnings that were spent on rice imports. Other than rice, the import dependence on a number of food types appears to be still significant. They include wheat, milk products, sugar, lentils and oil and fats. In 2015, Sri Lanka has imported over Rs.270 billion worth of food including wheat and maize imports as intermediate goods. Foods and beverages still remain the single largest import category of consumer goods.

Even though the food security situation at the national level has improved over time, there are significant concerns about food security at local and household levels. Statistics indicate that many persons, approximately 5.1 million or one in five, are undernourished (in terms of dietary energy supply) in Sri Lanka today. FAO and UNICEF statistics indicate that 26.3 percent of children below age five do not have the recommended weight for age and 21.4 percent and 14.7 percent are suffering from stunting and wasting in 2012. The depth of the food deficit is about 216 Kcal/capita/day in 2014. According to WFP (2007), the food availability in Sri Lanka presently depends mainly on domestic rice production and imports of wheat flour.

The role of the secondary food crops grown locally as supplements is not satisfactory. These figures provide ample evidence that the household food insecurity is still a significant problem even though the import dependence on rice has decreased significantly. Therefore, one can take little consolation over the fact of self-sufficiency in rice since the status of food utilization and nutrition appears to be low even by the South Asian standards. It further implies that increasing the local production of food alone is not sufficient for ensuring food security of the masses and there are issues of affordability and access to food that needs the attention of policymakers.

Recovering growth potential of export agriculture sub-sector The Sri Lankan plantation sector exports are highly dependent on world market conditions. Several external factors such as the sharp drop in oil prices and political instability in key export markets such as the Middle East and Russia, have significantly contributed to a fall in tea auction prices. A similar decline was observed in FOB prices of rubber also. There is a tendency in 2016 for rubber prices to dip further due to the slowing growth in China and due to high supply. While these external shocks can cause short- to medium-term losses in the sector, there are more long-standing structural issues that retard the growth potential of the plantation sector in the long run.

Sri Lanka’s plantation industry has been suffering from a number of long-standing issues, particularly with regard to high cost of production, low productivity and low profitability in comparison with other producing countries. International comparison indicates that the cost of production (COP) of tea is the highest in Sri Lanka relative to the other competing tea producers such as India, Kenya, Bangladesh and Vietnam. The COP value of 2.3 USD/kg in Sri Lanka is about three times higher than that of Vietnam (0.75 USD/kg). Also, the average productivity of the plantation crops is constant or marginally increasing and remains among the lowest among Sri Lanka’s competitors. For instance, the current average tea productivity in Sri Lanka (1620kg/ha) is lower than that of Kenya (2480 kg/ha) and India (1640 kg/ha). These issues are common to rubber as well.

There are several factors to which the aforementioned high cost of production, low productivity and low profitability can be attributed. Inadequate replanting, price fluctuation, labour shortage and high wages, land degradation and low living/working conditions of the labour force can be highlighted as the most important of them. Even though the productivity and production can be improved through replanting and infilling, only a very insignificant extent of replanting has taken place over the years. In 2015, only 0.4 percent of the total extent under tea cultivation, including smallholders, was replanted while the corresponding value for rubber is a mere 0.5 percent.

Moreover, despite some improvements in welfare and wages in the plantation sector, there is a dearth of labour in both tea and rubber sectors. According to a labour force survey, worker population is drastically declining from 39 percent of total estate population in 1992 to 20 percent in 2012. Out of a resident plantation population of 987,074 people, only 193, 412 persons (20 percent) are registered workers who contribute their labour to estates while the others are either dependants or working elsewhere while living in the estates.

The declining soil fertility due to the continuous practice of mono cropping for a long period of time is another factor that contributes to the downfall of plantation crops. Tea soils in Sri Lanka, especially in the middle and high elevations, are more prone to erosion. Productivity of large extents under tea and rubber has decreased mainly due to soil erosion and nutrition depletion, making crop production less profitable.

Renovation and sustained management of fragile natural resource base The degradation of the natural resource base that supports all sub-sectors of agriculture has become a major challenge. It is generally believed that the traditional system of agriculture consisting of paddy-chena-home garden triad used to be a sustainable model in the long-run, especially under low population conditions. However, this balance was seriously disturbed by opening up of wet zone forests in the upcountry areas for plantation crops since the first quarter of the 19th century that had hitherto been kept untouched by the local farmers for conservation purposes. Since then, large-scale degradation of natural resources is a general outcome of all agriculture development activities in Sri Lanka. Rapid deforestation initiated in wet and intermediate zones by plantation agriculture has spread into the dry zone areas with major colonization schemes and expansion of chena cultivation with population growth.

Despite the positive contribution made by the green revolution to increase agricultural productivity, it is now being identified as a major source of environmental degradation and ecosystems damage. Rightly or wrongly, high use of agro-chemicals promoted by green revolution technologies is now blamed as the major cause of the chronic kidney disease (CKD) spreading rapidly in the major agriculture areas of the country. From one point of view, natural resource and environmental degradation associated with agriculture can be seen as a result of persistent poverty that prevails among small farmers.

However, the sad reality is that these farmers themselves have become the main victims of their activities. Environmental damage originating in agriculture creates spillover effects to other sectors such as energy, public health, water supply and industry too. Overcoming the current unsustainable practices is a key policy challenge to be faced by the agriculture sector in the future. In this regard, despite criticisms by some parties, it is observed that the ongoing movement for toxic-free agriculture

(wasa wisa nethi govithena) is an eye opener for many who kept a blind eye to this serious issue until recently.

Facing imminent threat of climate change The National Adaptation Plan for Climate Change Impacts in Sri Lanka: 2016-2025 was launched by the president two months ago. This plan was prepared by a team of IPS experts for the Climate Change Secretariat of the Mahaweli Development and Environment Ministry. It was developed through an exhaustive expert consultation process that covered several economic sectors and it identified nine areas that need special attention in adaptation against climate change.

Out of these nine areas, two (food security and export agriculture) represent core sub-sectors of agriculture and two others (water and biodiversity and ecosystems) are closely related areas. The plan also identified impacts and actions on agro-based industries and biomass energy under the respective areas. In all, it indicates agriculture is the major sector of the national economy which is most vulnerable to the impacts of climate change than industry or services sectors.

Economists usually tend to quote the Central Bank report about the good or bad impacts of weather on annual growth through their impacts on agriculture and hydropower generation. However, these impacts are going to be far more complicated and widespread in the future. Facing the threat of climate change is a challenge not only for the agriculture sectors but for the entire agenda for sustainable development of the country. Impacts of climate change is going to be a major challenge for agriculture for near as well the distant future and effective policies and actions are necessary to face this challenge.

The National Adaptation Plan for Climate Change Impacts in Sri Lanka: 2016-2025 is a good starting point to initiate the action. The IPS recognized the importance of this issue about 10 years ago and continued to work on it as policy researchers, an effort which is gradually being recognized nationally and internationally as is symbolized by entrusting the IPS with the major national plan on climate change by the relevant line ministry.

Way forward The problems of agriculture sector in Sri Lanka are multifaceted and they rest upon many factors such as agricultural technology, trade, food production and distribution, natural resource and environmental problems, food consumption patterns and national planning and government policies. None of these factors are static and hence, any policy or strategy to solve them also has to be dynamic in nature. They call for far-sighted policy frameworks that address the underlying factors rather than the more politically sensitive symptoms of the problems concerned.

Despite this underlying reality, the agricultural policies in Sri Lanka have largely been driven on popular political agendas that aimed at addressing the sensitive short-term issues (symptoms rather than causes), sometimes even causing long-standing damages to the system. This can be identified as the first major pitfall. Many agricultural policies since independence can be identified as populist political movements that appealed to the rural masses whose vote used to be critical in the electoral process. This element can be seen in many agricultural policies. Examples include the Paddy Lands Act, colonization and alienation of state land, fertilizer and other input subsidies, major irrigation

development projects such as the Mahaweli scheme, guaranteed price schemes, 'Divi Neguma', distribution of exotic breeds and even the toxic-free agriculture movement today.

Once captured the mass attention, these populist policies acquire a political existence of their own, connected to competitive party politics too, making it very difficult to reverse or amend them, regardless of their effectiveness. It needs immense political courage to deal with them objectively due to the high political sensitivity.

The second pitfall is connected to the first. Farmers have rational expectations about the policies and may easily adapt their responses accordingly. In all sub-sectors, the vast majority of farmers being smallholders with limited asset profiles, their livelihood expectations appear to be oriented more towards fulfilling short-term needs. The populist policies on agriculture have always focused on the demands arising from the farmers' short-term expectations and disregarded their repercussions on the long-term interests of the farmers or the sustainability of the system. Numerous current problems in the agriculture sector can be identified as byproducts or unintended ill effects of past policies that could have been avoided if the long-term interests also were given some consideration. Finally, many agricultural policies pursued a piecemeal approach rather than taking the entire value chains into consideration. The agriculture sector is organised as a network of value chains, some having links connected to global markets that extend beyond the boundaries of the country. Very often, the problems in agriculture are interconnected along the value chains, creating impacts across various layers. Many agricultural policies appear to have focused on the production layer of the value chains where a large number of small farmers are occupied, naturally a politically motivated selection.

Some policies have gone to the extent of promoting the farmers' interests even at the expense of the other important actors in value chains. For instance, the agriculture price support policies have often been formulated on the assumption of the middlemen's exploitation of farmers and the consumers and disregarding the important role played by them in value chains. Such policies, while popular in the short-term, could be counterproductive in the long-run. Therefore, taking the value chains as a whole is very important in formulating policies in agriculture.

In this connection, a positive development is observed in the initiatives taken by the Primary Industries Ministry for the development of agricultural value chains. The most challenging task in agriculture development policy today is to develop sustainable value chains in a socially inclusive and pro-poor manner that improve the situation of small farmers, poor agricultural workers as well as various agricultural enterprises across the different layers of agricultural value chains.

Avoiding the above pitfall should form the key principles of an integrated strategy to bring Sri Lanka's agriculture sector into a position of strength.