Country Context and current situation: Papua New Guinea’s current population is estimated at over 8.5 million people, 85% of which live in rural communities that are hard to reach. It is administratively divided into 22 provinces and 89 districts. The country geographically shares a 720-km land border with Indonesia on the west and sea borders with Australia on the south and Solomon Islands on the southeast through which traditional border crossers travel daily. With the declaration of the first coronavirus (COVID-19) case in PNG on 20 March, 2020 in Lae, Morobe province, the government declared the state of emergency (SOE) and put in place regulations that restricted movement of people as a measure to containment of the spread of the disease. On Thursday 02 April 2020, the Government of PNG (GoPNG) declared the extension of the State of Emergency (SOE) for the duration of two months effective as of 06 April 2020. To date, there are 8 cases of coronavirus infected persons found in PNG with no deaths. Additionally, the government has taken the response to COVID-19 very seriously. The government in response to COVID-19, has set up a Ministerial Committee consisting of key ministries and at the operational level, activated the National Emergency Operations Center (NEOC). The global pandemic COVID-19 is treated primarily and rightly as a health crisis, its economic ramifications and socio-economic disruptions are profound and evident from the start and to some extent has caused disruptions to healthy lifestyle and activity have impacts on food system and food security for the PNG population especially the most vulnerable.

Impact on food security and nutrition: The restrictions on movement of goods and people as part of the SOE has had effects, going beyond the direct impact on health in PNG. This has led to the disruption of market supply chains, trade of food and agricultural produce with further impacts on the populations that depend entirely on informal economy for their food and income security and their livelihoods. Additionally, with Papua New Guinea’s weak health system where it has already exhausted its current capacity and pre-existing issues relating to food insecurity and malnutrition as well as high levels of poverty, the country’s future is at risk. Furthermore, PNG is listed as LIFDC, with more than half of the population in PNG (57 percent) experiencing moderate to severe food insecurity. The population experiencing moderate to severe food insecurity ranges from a high of 73 percent in Western Province to a low of 35 percent in Madang Province (PNG Demographic Health Survey Report, 2016-18) including the Sepiks with high food insecurity rates of 29 per cent stunting and 7 per cent wasting (PNG Household Survey, IFPRI, 2018). The rural population do not seem to have access to sufficient, safe and nutritious food to meet their dietary intake (National Food Security Policy 2018-2027).

Closure of urban fresh food markets: The closure of urban main fresh food markets was a measure to control the spread of the virus. In March and April, 2020, the main urban markets in the following towns closed. These were in Goroka, Lae, Ramu, Manus, Kavieng, Alotau, Popendetta, Kundiawa, Mendi, Tari, Buka, Kainantu, Kokopo and Rabaul. To date, the markets that are still closed are Kokopo, Kiunga, Goroka, Tari, Mt Hagen, Buka while other markets like Mendi reopened but farmers have not returned to selling in that Market. The closure of these markets had a negative impact on livelihoods of people who depend on the informal sector including the street vendors who buy and sell their goods from farmers and wholesalers and aggregators along the fresh food supply chain. Additionally the impact was felt by the urban residents, hotels and supermarkets who mostly depend on sales of fresh produce from urban main

markets. The closure of these markets has caused major disruption to the agricultural food, income and livelihoods of people living in all provincial centres in Papua New Guinea.

**Impact on smallholder and crop production:** Though local fresh producers and families are encouraged to increase planting of food production to supply the reopened markets, they fear of replanting as they are facing food surplus in harvest with no output channels of distribution to market or sell, this may however affect supply during the lock down periods. However, in the Highlands region, food production is not seasonal, COVID-19 will not be affecting smallholder farming and the volume of output of produce is consistent. This is the same in the coastal areas in PNG.

**Impact on food supply chain and food processing:** The SOE lock-down has restricted transportation of fresh produce from subsistence farmers in peri-urban areas to main markets in urban centers and also from towns, the increased number of road blocks i.e. more than 50 roadblocks on the Highlands highway has caused high prices on processed foods such as rice, tinned fish, biscuits and disrupted the food supply chain. The prices of fresh produce in urban areas were observed to have increased by 50 to 60%, the price of processed food in trade stores have increased as a result of increased roadblocks pass fees. The rural population have resorted to selling and buying at roadside markets for fresh produce however, crop variety is very limited at these smaller roadside markets. Prices of food at the roadside market have gone low to sell fast their produce, as they fear fresh produce to perish hence decrease of cash flow in villages. Large quantities of fresh produce is grown in the Highlands provinces of Papua New Guinea, and this sold to a range of markets, including the coastal cities of Port Moresby, Lae and Madang. The quality of food at supermarkets in main centres (Lae, Port Moresby) were observed to dropped drastically during the first 14 days and this has continued in the quarantined provinces during the continuous lock down. There is a greater demand for fresh food produce in urban areas, cities and towns. The flow of food chain is limited due to lock down in major cities and has slightly increased pricing on food crops and vegetables. There has also been an increase in the road side markets by since the closure of the markets E.g. resellers of bundles of greens would sell at a price of K5.00 a bundle rather than its usual price of K2.00 or K1.00 at the local market. Others are forced sell bags of produce for lesser price than required to prevent produce from perishing and rotting.

**Logistics and trade restrictions:** With international flights and cargo movements currently constrained, PNG may have to rely more on local food for human consumption and local feed for fish and livestock produce if the transportation of goods into and within the country becomes problematic. The challenge is in the two big cities of Port Moresby and Lae, which rely on imports as well as food coming down from the Highlands. This is to avoid the shortage of fresh fruits and vegetables from the Highlands in the cities. One factor working in PNG’s favor is that local food manufacturers have long maintain large raw-material inventories, to hedge against shipping disruptions or foreign shortages. While COVID-19 containment measures will have a detrimental effect on overall economic activity, there are signs that well-known local food brands may experience an upturn in PNG, at least in the short-term. Paradise Foods reported that sales during the last two weeks of March were 20% higher than expected, as urban residents stocked up on provisions. While business entities have been warned of price gouging on essential food items, the pricing regulator, ICCC, has affirmed it is aware of genuine price increases that may occur due to beyond their control. The National Government has however instituted price control measures on a total of 21 goods and services considered essential under the current SOE response to COVID-19. Food products indicated include; rice, flour, sugar, baby
Social monitoring and protection: The most affected groups during the SOE lockdown are vulnerable groups such as those who have lost their jobs or have reduced pay due to the lock down. These are the marginalized groups and are the most affected during these hard times. Most of these groups rely on the informal economy and business houses for donations. With SOE restrictions, they are left to fend for themselves. There groups in the urban and peri urban areas in the quarantined provinces are marginalized and will need assistance. It is predicted that the continuation of lock down will strongly affect this marginalized group, the local fresh food and subsistence farmers, transportation and disruption to market linkages and city dwellers who rely on the fresh food market exchange from agriculture smallholders to support family and daily sustenance.

SOCIAL PROTECTION MEASURES

Food Distributions: In response to the impacts on food security, there has been some tremendous efforts made to mitigate the negative impact on food consumption in certain parts of PNG. In Kokopo, where the second coronavirus case was declared, there was a kind gesture by the locals to take on the initiative to donate food to the lock-down villages within the Raluana LLG in Kokopo District. Food donations came from all over ENB including members of parliament, business houses, provincial groups and rural villages to show their resilience and initiative as first responders.

The NCD Food Bank comprised of a group of citizens are distributing food to those in need and are the most affected in Port Moresby. The local NGO has reached 7 per cent of their target population of 6,000 people. Their target populations are mostly the vulnerable groups such as people living with special needs, people with HIV, AIDS, TB, widows, GBV survivors, pregnant women, elderly and the unemployed youth.

The NCDC Food Subsidy Program is working through 60 churches within 12 ward in 10 Motu Koita villages specifically aimed at the homeless, people living with special needs and also those who have lost their jobs and have had pay cuts in the informal sector who have found it hard to trade during this hard times. The program delivered over 20 tonnes of fresh food and processed food to the beneficiary population.

In the Autonomous region of Bougainville, a small youth group called the Bougainville Youth in Agriculture used the E-didiman application to promote e-agriculture and in particular market the sales for fresh food produce online. On registry, they have 600 farmers to supply fresh food in response to the impact of COVID-19. They have supplied over 60 customers in Buka town and are now considering the option of expanding provincial centres outside Buka such as Port Moresby.

In Lae, Morobe province, the Food Security Sector working group comprised of Australian High Commission Consulate, Lae Chamber of Commerce and Lae City Authority, NARI, DAL, PNGWIADF, Fresh produce, Taiwan Technical Mission and Trukai Industries are embarking on a market redevelopment, cash for work program, seed distribution and multiplication of certain food crops in response to the impact of COVID-19 on food security. A fisherfolk at Erap, Lae working with DAL and PNGWIADF, Douglas Kawa, saves up to K6,000 worth of Gift tilapia fish in stock during the SOE lock down. He intends to sell in July to retail supermarkets in Lae. He says his challenge is fish feeds that he relies on an imported stock that will be affected if government restrictions. As well, the Evangelical Lutheran Church of Papua New Guinea are mobilizing communities in the urban areas of Ampo and Malahang for urban agriculture training and seeds distribution to enhance food production.

The Enga Provincial Government is providing a stimulus package of K1m for agriculture alone during this period and beyond for people to borrow from the National Development Bank to go into farming especially for potato, carrot, bulb onion and strawberries. If the
demand warrants, this package will increase each year looking into other commodities. In the Central Province, the member for Goilala is putting up K300,00 to support Central Province Governor’s intent to build central province market at Bautama so local producers can sell their produce without the hassle of travelling into Port Moresby.

Following the announcement of the Fresh Produce and Vegetables Freight Subsidy Service on 8 May, 2020, all fresh produce and vegetables will be shipped free of freight charges from Lae Port, Morobe province to Port Moresby, National Capital District. This freight service for shipment follows the signing of a Service Level Agreement with the Marape-Steven Government through the Department of National Planning and Monitoring and the Bismark Maritime Limited. This was an initiative under the emergency arrangement and directed by the SOE Controller aimed at revitalizing and maintaining the continuous supply of fresh produce and vegetables from easily accessible Lae Port, From the Highlands, Madang and Morobe Provinces to NCD. This Freight subsidy, with potential impact on ten (10) provinces, is immediately available for six-month period.

EMERGING BIOSECURITY ISSUES

Fall armyworm: The invasive insect pest, Fall armyworm, FAW, (Spodoptera frugiperda) has invaded PNG and found in Daru, Western province. The FAW prefers the crop, corn or maize. In addition to its preference on maize, FAW can feed on more than 80 plant species and the larvae can wreak havoc on wide range of crops including rice, sorghum, sugarcane, vegetable crops, peanuts, orange, cotton, cabbages and others. FAW can cause significant yield losses if not well managed or in the absence of natural biological control. Unlike quarantine pests under official control or insects with gregarious behaviour (e.g. some locust species), FAW does not lend itself to official, centralized control. FAW is a farmers’ problem and the farmers need help in sustainably managing this new pest. It is estimated that almost 40 percent of those species that armyworms target are economically important.

African swine fever: The animal disease, African swine fever is a highly contagious disease. Humans cannot catch ASF from infected pigs but humans can spread the disease and infect pigs in many ways. The fatal animal disease has invaded the three Highlands provinces of Southern Highlands, Enga and Hela. From a surveillance assessment, over 2000 pigs died in the Upper, lower and central Mendi in Southern Highlands area with the possibility of ASF being the causal agent. The other infected sites are Kandep, Surinki in the Lalagam Porgera District, Kamas and Teremanda in the Wabag District and Margarima District, Hela province.