REPUBLIC OF KENYA

MINISTRY OF AGRICULTURE, LIVESTOCK AND FISHERIES

2019

# BIG 4: 100% FOOD AND NUTRITION SECURITY

# PROGRESS REPORT







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# BIG FOUR: 100% FOOD AND NUTRITION SECURITY PROGRESS REPORT

## 1.0 INTRODUCTION

### 1.1 BACKGROUND INFORMATION

In 2017, Agriculture directly contributed 31.3% to GDP equivalent to Kshs. 2.695 trillion and a further 27% GDP indirectly through linkages with manufacturing & service related sectors (Economic Survey, 2018).

Agriculture is dominated by small holder farmers who contribute about 80% of agricultural production which is mainly subsistence, rain-fed with low mechanization levels

Its potential contribution is constrained by:

1. Inadequate access to quality inputs,
2. Marketing inefficiencies,
3. Non-conducive investment environment,
4. Climate change, declining soil fertility,
5. Land fragmentation,
6. Small non-commercial production models and
7. Low application of knowledge and innovation

Despite many efforts, 10 million people suffer from food insecurity, 4 million chronically food insecure, 1.5 million perpetually require food aid while 29% children under 5years are stunted.

Kenya's overall food deficit is between 20 - 30% and increasing within the context of a population growing at the rate of 2.6% per annum

### 1.2 BIG 4 AGENDA PILLARS

The Big Four agenda is transformative agenda based on four socio-economic pillars:

1. Food and Nutrition Security for All
2. Affordable Housing
3. Universal Health Care
4. Manufacturing

Big Four Agenda seeks to address the most pressing concerns currently facing Kenyans while creating the best environment for achieving accelerated socio-economic transformation, increased job creation and improved quality of life

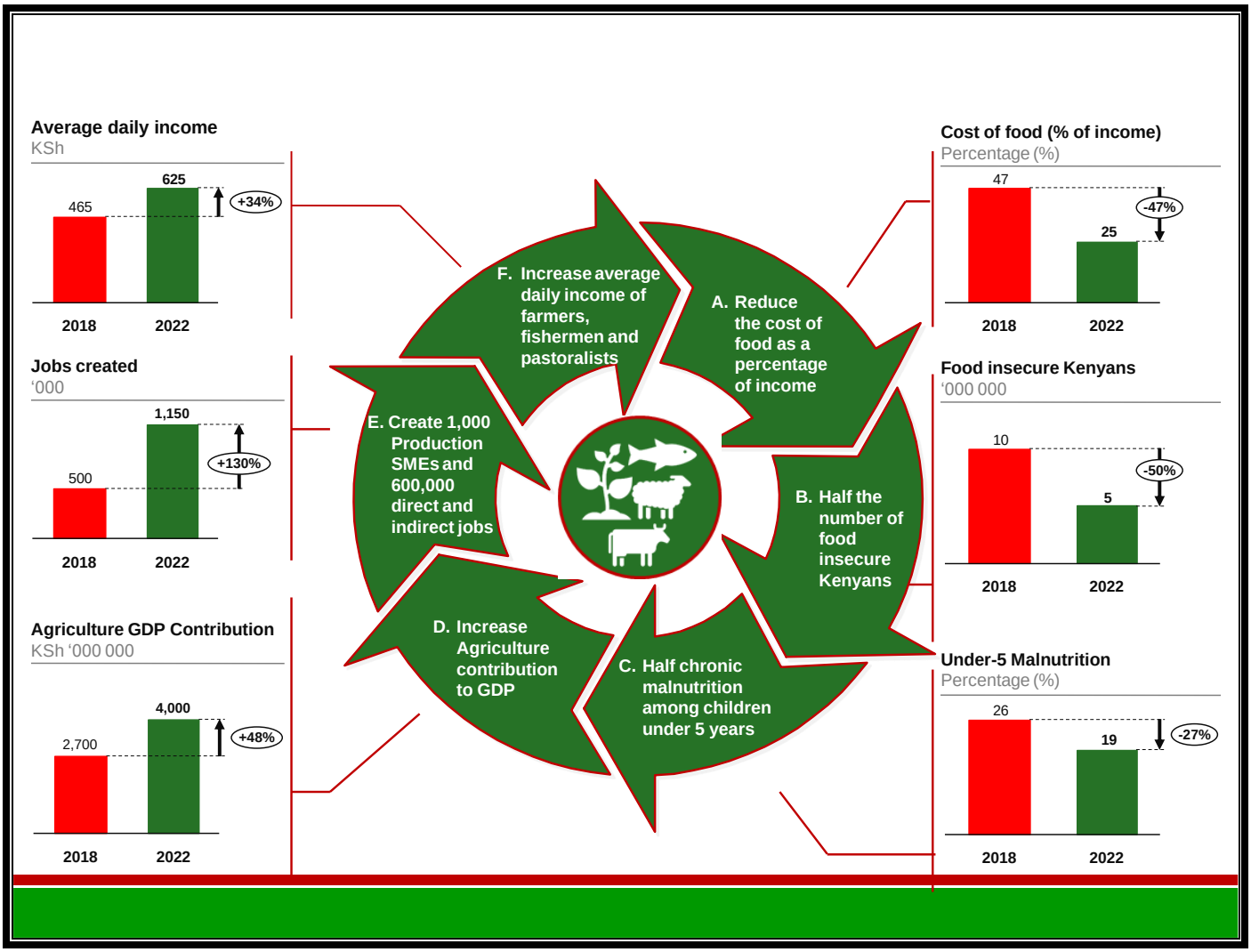
The Big Four agenda is tied closely to the Third Medium Term Plan for the Vision 2030 which will run from 2018 to 2022

# 2.0 THE FOOD & NUTRITION SECURITY (FNS) PILLAR TARGETS

## 2.1 FNS PILLAR KEY OUTCOMES

The food and nutrition Security **Pillar 6 Key Outcomes** by **2022** are:

1. **Reduce** the **cost of food** as a percentage **of income** from **45%** in 2017 to **25% by** 2022
2. **Half** the number of food **insecure** Kenyans – from **10 %** to **5%**
3. **Half chronic malnutrition** among **children under 5 years-**from **26%-19%**
4. **Increase** Agriculture contribution to **GDP by 48%**
5. Create **1,000 Production SMEs** and **600,000** direct and indirect **jobs**
6. **Increase** average daily **income of, Farmers, Fishermen and Pastoralists from Kshs 465 to Kshs 625 by 2022**



## 3.0 THE FOOD AND NUTRITION SECURITY PILLAR CRITICAL OUTCOME AREAS OBJECTIVES

The FNS Pillar has 3 Critical Outcomes that are driven by 16 Objectives.

The Three Critical Outcomes are:

### 3.1 Availability & Nutrition

1. Increase annual maize production from 40 million to 67 million (90kg) bags by June 2022
2. Increase annual rice production from 112,800 metric tons to 406,486 metric tons by June 2022
3. Increase annual potato production from 1.2 million metric tons to 6 million metric tons by June 2022
4. Increase annual meat production from 700,000 metric tons to 990,000 metric tons by June 2022
5. Increase annual processed milk from 630 million litres to 1 Billion litres by June 2022
6. Increase annual fish production from 135,280 metric tons to 231,359 metric tons by June 2022

### 3.2 Affordability

1. Increase irrigated land by 255,000 acres through the construction of smallholders water pans by June 2022
2. Reduce post-harvest losses from 20% to 10% by June 2022
3. Reduce value chain inefficiencies by at least 50% by 2022

### 3.3 Smallholders value addition

1. Increase annual nuts & oil production (macadamia, coconuts and cashew nuts) from 140,958 to 697,221 metric tons by June 2022
2. Increase fruit crop (avocado and mango) production from 1,207,868 to 1,645,276 metric tons per year by June 2022
3. Increase annual cotton production from 29,000 bales to 200,000 bales by June 2022
4. Increase coffee production from 40,000 metric tons to 100,000 metric tons by June 2022
5. Increase Tea production from 1.1 million metric tons to 6 million metric tons by June 2022
6. Increase annual hides & skins production from 56.75 million to 72 million square feet by June 2022
7. Increase annual pyrethrum production from 300 metric tons to 3,000 metric tons by June 2022

## 4.0 CRITICAL BIG 4 INITATIVE TARGETS BY 2022

1. Increase **annual maize production** from the current 40 million (90kg) to 67 million (90 kg) bags per year by 2022

| | Critical Initiatives | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
|---|---|---|---|---|---|---|---|
| 1. | Expand area under maize production (397,000 acres) for short & long rains<br>a) Public land[1] | 73,000 acres | 14,000 | 18,000 | 20,000 | 21,000 | Head Food Crops<br>Head Food Security |
| | b) Private land[2] | 284,000 acres | 38,000 | 78,000 | 82,000 | 86,000 | Head Food Crops<br>Head Food Security |
| 2. | Expand irrigated land under maize production (195,909 acres)[3] | 195,279 acres | 10,800 | 50,924 | 67,090 | 67,095 | Head Food Crops<br>GM NIB |
| 3. | Provide subsidized soil liming services to correct soil acidity in maize producing counties<br>a) Procurement of mobile labs, equipment & lime | 400,000 metric tons of Lime | 100,000 | 100,000 | 100,000 | 100,000 | Head Food Crops<br>Head Fertilizer |
| | b) Liming of acidic soils[4] | 1,000,000 acres | 250,000 | 250,000 | 250,000 | 250,000 | Head Food Crops<br>Head Fertilizer |
| 4. | Procure and distribute subsidized fertilizers | 400,000 metric tons | 100,000 | 100,000 | 100,000 | 100,000 | Head Food Crops/ Fertilizer |
| 5. | Provide subsidized production and harvesting machinery and accessories | 2,900 Tractors | 400 | 600 | 900 | 1,000 | Director Engineering |
| 6. | | 600 Accessories | 100 | 100 | 200 | 200 | Director Engineering |
| 7. | Avail subsidized high yielding maize seeds varieties for different agro ecological zones | 10,100 metric tons | 2,300 | 2,400 | 2,600 | 2,800 | Head Food Crops |
| 8. | Avail disease and pest control agricultural chemicals for 20 counties | 800,000 liters | 200,000 | 200,000 | 200,000 | 200,000 | Head Plant Protection |
| 9. | Avail subsidized crop insurance to farmers for risk mitigation | 2,000,000 farmers | 244,000 | 605,000 | 811,000 | 340,000 | Head Food Security |

1: Public land: (KALRO, ADC, NYS, KDF) , Trans Nzoia, Nakuru, Uasin Gishu, Narok, Bungoma, Nandi, Kakamega.
2: Private land: Trans Nzoia, Uasin Gishu, Narok, Nakuru
3: Nzoia, Mwea, Bura,Hola, Perkerra, Lower Kuja, Kano , Turkana

4: Trans Nzoia, Bungoma, Uasin Gishu, Kirinyaga & Nakuru

| 2. Increase annual rice production from current 112,800 metric tons to 406,486 metric tons per year by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Critical Initiatives** | | **2022 Target** | **2018/2019** | **2019/2020** | **2020/2021** | **2021/2022** | **Department/Owner** |
| 1. | Expand area under rice production (rain-fed)[1] | 5,000 Acres | 2,000 | 1,000 | 1,000 | 1,000 | Head Rice Promotion |
| 2. | Expand irrigated land under rice production (irrigated)[2] | 128,500 Acres | 1,000 | 16,356 | 50,572 | 60,572 | Head Rice Promotion |
| 3. | Avail certified rice seeds for 23 counties[3] | 120 metric tons | 60 | 20 | 20 | 20 | Head Rice Promotion |
| 4. | Support access of machinery & accessories (Tractors, Planters, Driers, Harvesters) by farmers ,counties & S MEs through use of Innovative Commercial online Agricultural Machinery Hire Service Voucher System to Increase mechanization from 25% to 40% | 100 C. harvesters | 6 | 34 | 60 | 0 | Director Engineering |
| | | 300 tractors | 50 | 100 | 150 | 0 | Director Engineering |
| | | 100 Weeders | 30 | 40 | 30 | 0 | Director Engineering |
| | | 100 Walking tractors | 100 | 100 | 100 | 0 | Director Engineering |
| | | 300 accessories | 300 | 300 | 300 | 0 | Director Engineering |
| | | 100 Transplanters | 100 | 100 | 100 | 0 | Director Engineering |
| 5. | Procure and distribute subsidized fertilizer | 86,718 metric tons | 13,700 | 18,250 | 24,400 | 30,368 | Head Fertilizer Unit |

1: Busia, Kwale, Meru, Isiolo, Bungoma, Kakamega, Murang'a W/Pokot
2: Mwea, Ahero, West Kano, Kimorigo, Kitobo, Bunyala, Lower Nzoia, Lower Kuja & community owned schemes- Gem Rae, Anyiko , Chiga, Nyachoda, Kimorigo, Kitobo, Vanga, Vichikini, Oluch Kimira.
3: Bungoma, Meru, Migori, H/Bay,W/Pokot, Kakamega, Isiolo,Kwale, E/Marakwet, Murang'a Busia, Kisumu, Kirinyaga, Migori, H/Bay, Busia, T/aveta, Kwale, Meru, T/River, Kilifi, Murang'a, Baringo, E/ Marakwet, Kakamega, Bungoma, Isiolo, T/Nithi, Embu, Siaya

| 3. Increase annual potato production from the current 1.2 million metric tons to 6.0 million metric tons per year by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Increase production of basic potato seed | 12,382 MT | 459 | 1,162 | 3,000 | 7,761 | Head Horticulture |
| 2. | Increase production of certified potato seed | 610,976 MT | 17,946 | 50,517 | 142,205 | 400,308 | Head Horticulture |
| 3. | Develop potato aggregation centers with appropriate potato handling facilities | 27 centers | 12 | 5 | 5 | 5 | Head Horticulture |
| 4. | Support ware & seed Potato Infrastructural establishment through farmers cooperatives, common interest groups (CIGs) and Public Private partnership | 3 cold stores | 2 | 1 | 0 | 0 | Head Horticulture |
| | | 75 ambient stores | 12 | 30 | 33 | 0 | Head Horticulture |
| | | 270 DLS stores | 81 | 90 | 99 | 0 | Head Horticulture |
| 5. | Expand irrigated land under Irish potatoes production | 54,582 acres | 0 | 2,000 | 25,000 | 27,475 | GM NIB |

| 4. Increase annual meat production from the current 700,000 metric tons to 990,000 metric tons per year by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Establish 50 feedlots though strategic partnerships | 50 Feedlots | 14 | 15 | 10 | 11 | Head Mrktg & Value Addition |
| 2. | Establish 10,000 acres of Fodder & pasture production and conservation | 10,000 Acres | 3,000 | 3,000 | 2,000 | 2,000 | Head Breeding Unit |
| 3. | Promote bull schemes for breeding and improvement of beef cattle | 8 Schemes | 2 | 3 | 2 | 1 | Head Breeding Unit |
| 4. | Expand land under irrigated pasture | 30,000 Acres | 0 | 10,000 | 10,000 | 10,000 | GM NIB |
| 5. | Support livestock insurance and subsidy in 14 counties (Tropical Livestock Units) | 300,000 TLUs | 110,000 | 160,000 | 220,000 | 300,000 | Head KLIP |
| 6. | Increase vaccination coverage | 80% Coverage | 50 | 60 | 70 | 80 | Head Disease Surveillance, Vector Regulatory and Zoological Services |
| 7. | Complete National Livestock Identification and Traceability System (LITS) | 47 Counties | 5 | 15 | 25 | 47 | " |
| 8. | Enhanced safety of foods of animal origin | 100% Coverage | 60 | 70 | 80 | 100 | Head, Veterinary Public Health |
| 9. | Suppress tsetse infestation in 5 tsetse belts for agricultural production | 5 Belts | 1 | 2 | 3 | 5 | Head Zoological Service |
| 10. | Rehabilitate/construct, equip and mechanize pig breeding & multiplication structures in DTI-Naivasha and AHITI Nyahururu farms | 2 Structures | 2 | 0 | 0 | 0 | Head Training |
| 11. | Supply of 12,000 piglets per year to 60 SMEs | 42,000 Piglets | 6,000 | 12,000 | 12,000 | 12,000 | Head Training |
| 12. | Rehabilitate/construct, equip and mechanize poultry breeding & multiplication structures in livestock farms | 6 Centres | 2 | 2 | 2 | 0 | Head Breeding Unit |
| 13. | Produce & avail 720,000 day old chicks to farmers/annum | 2,166,000 day old chicks | 6,000 | 720,000 | 720,000 | 720,000 | Head Breeding Unit |
| 14. | Support establishment of 6 poultry agribusiness models for youth and women | 6 business models | 2 | 3 | 1 | 0 | Head Breeding Unit |
| 15. | Rehabilitate/construct, equip and mechanize rabbit breeding & multiplication structures in livestock farms | 2 structures | 2 | 0 | 0 | 0 | Head Breeding Unit |
| 16. | Produce & avail 10,000 rabbits to farmers/annum to schools, youth and women | 31,000 Rabbits | 1,000 | 10,000 | 10,000 | 10,000 | Head Breeding Unit |

| 5. Increase annual processed milk production from the current 630 million to 1 billion litres per year by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Build capacity of dairy stakeholders along the value chain | 350 stakeholders | 50 | 80 | 100 | 120 | Head Diary Unit |
| 2. | Strengthening Livestock Breeders Associations | 7 Associations | 2 | 1 | 2 | 2 | Head Diary Unit |
| 3. | Improvement of animal genetics (AI services & research) | 7 Breeds | 0 | 2 | 3 | 2 | CEO, KAGRC |
| 4. | Improve feed availability, quality & safety-random sampling | 50% Feed sampled | 10 | 20 | 35 | 50 | Head FU<br>Head VPH |
| 5. | Embark on registration of breeders | 7 Breeders | 2 | 1 | 2 | 2 | Head Diary Unit |

| 6.1 Increase annual aquaculture fish production from 12,356 metric tons to 84,551 metric tons by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Develop high performance broodstock for seed multiplication by 125 authenticated private hatcheries | 150,000 brooders | 10,000 | 40,000 | 50.000 | 50.000 | Head Aquaculture |
| 2. | Promote aquaponics systems in learning institutions to entrench fish farming in youth | 1,065 institutions | 15 | 300 | 350 | 400 | Head Aquaculture |
| 3. | Stock and restock community dams and irrigation canals with fingerlings | 11.5 million fingerlings | 1 | 3 | 3.5 | 4 | Head Aquaculture |
| 4. | Support small holder sea weed farmers in Coastal Counties to produce and develop value added products | 500 smallholders | 50 | 150 | 150 | 150 | Head Blue Economy |
| 5. | Increase productivity of 30,000 fish farming households in 15 Counties under Aquaculture Business Development Project (ABDP) | 749 Kg/Fish | 356 | 487 | 618 | 749 | Head Aquaculture |

| 6.2 Increase annual marine fish production from the current 23,286 metric tons to 126,056 metric tons per year by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Operationalize Liwatoni Fisheries Complex to facilitate landing of at least 30% of fish caught by foreign vessels. | 32,130 metric ton | 4,590 | 9,180 | 9,180 | 9,180 | Head Marine Fisheries |
| | Strengthen capacity to undertake MCS through operationalizing PV Doria | 100% | 30 | 30 | 40 | 0 | Head Marine Fisheries |
| | Develop fish port infrastructure and accompanying facilities in Lamu, Malindi and Shimoni | 3 fish port infrastructure | 1 | 1 | 1 | 0 | Head Marine Fisheries |
| 2. | Build capacity for domestic industrial fisheries through joint ventures targeting local investors and reflagging of 17 vessels | 16 Vessels | 4 | 4 | 4 | 4 | Head Marine Fisheries |
| 3. | Build capacity for domestic semi-Industrial fleet through joint ventures targeting local investors | 50 Vessels | 19 | 15 | 10 | 15 | Head Marine Fisheries |
| 4. | Enhance artisanal fisheries through capacity building of fishers | 31,500 metric tons | 4,500 | 4,500 | 4,500 | 4,500 | Head Marine Fisheries |

| 6.3 Increase annual inland water fish production from the current 99,458 metric tons to 185,964 metric tons per year by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Enhance fish stocks in inland waters by restocking with 12 Million fingerlings | 86,506 metric tons | 5,865 | 19,200 | 27,241 | 34,200 | Head Inland Fisheries |
| | Protect fish breeding areas and critical habitats | 12.120 acres | 2,470 | 2950 | 3,200 | 3,500 | Head Inland Fisheries |
| | Implement Lake Victoria Fisheries Management Plan for sustainable exploitation of the resource | 100 % Mgt Plans | 30 | 30 | 30 | 10 | Head Inland Fisheries |
| 2. | Facilitate removal of invasive vegetation (hyacinth) from Lake Victoria and subsequent utilization as a raw material through PPP | 130 acres | 24.8 | 30.2 | 35 | 40 | Head Inland Fisheries |

| 7. Increase irrigated land by 255,000 acres through the construction of smallholders water pans and de-silting existing old dams by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Critical Initiatives | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Construct 125,000 household water pans (150 million cubic meters) to irrigate 125,000 acres in 27 counties | 125,000 acres | 3,000 | 40,000 | 42,000 | 40,000 | GM, NIB |
| 2. | De-silt 1,000 colonial era dams to expand their capacity to harvest 130 million cubic meters to irrigate 130,000 acres in all counties | 130,000 acres | 0 | 43,000 | 44,000 | 43,000 | GM, NIB |

| 8. Reduce post-harvest losses from 20% to 10% by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Critical Initiatives | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Reduce post-harvest losses in fisheries and fishery products by 2.5%: a) Establish fish value addition and market outlets | 20 outlets | 5 | 5 | 5 | 5 | Head Aquaculture |
| | b) Develop fish market and auction centre in Mombasa | 3 centres | 1 | 1 | 1 | 0 | Head of Blue Economy |
| | c) Promote fish consumption and marketing by conducting campaigns | 40 campaigns | 10 | 10 | 10 | 10 | Head Aquaculture |
| | d) Develop and roll-out an Integrated Electronic Fish Marketing Information System | 100% operational | 10 | 80 | 100 | 0 | Head Inland Fisheries |
| | e) Support and strengthen Aquacultural Association of Kenya & Wavuvi Association of Kenya | 100% supported | 30 | 50 | 100 | 0 | Head Inland Fisheries |
| | f) Develop 5 fish landing sites at the Coast and rehabilitate 6 fish landing sites in Lake Victoria | 11 landing sites | 3 | 4 | 4 | 0 | Director Inland Fisheries |
| | g) Accredit & operationalize fish quality laboratories | 100% Accreditation | 20 | 50 | 100 | NA | Head FIQA |

| 8. Reduce post-harvest losses from 20% to 10% by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 2. | Reduce post-harvest losses in maize production from 12% to 10%<br>a) Procure and distribute subsidized Aflasafe in 10 Aflatoxin prone counties | 649,300 Kilograms | 300,000 | 134,400 | 156,200 | 58,700 | Head Plant Protection |
| | b) Avail subsidized maize driers to SMEs | 20 Driers | 5 | 5 | 5 | 5 | Director Engineering |
| 3. | Reduction in post harvest losses for rice from 15% to 7% through the acquisition of machinery & capacity building on post harvest management | 100 harvesters | 6 | 34 | 60 | 0 | Head Rice Promotion |
| 4. | Reduction in post harvest losses for Irish Potato from 30% to 15% through the construction of seed and ware potato storage facilities | 3 cold stores | 2 | 1 | | 0 | Head Horticulture |
| | | 75 ambient stores | 12 | 30 | 33 | 0 | |
| | | 270 DLS | 81 | 80 | 99 | 0 | |

| 9. Reduce value chain inefficiencies by at least 50% by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Increase market access for leather and leather products | 100% market access | 70 | 80 | 90 | 100 | Director Hides & Skins |
| 2. | Increase consumption of processed milk | 26% processed | 12 | 16 | 20 | 26 | CEO Kenya Dairy Board |

| 10. Increase annual nuts & oil production (macadamia, coconuts and cashew nuts) from 140,958 to 697,221 metric tons per year by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Macadamia: Distribute seedlings to farmers | 3 million seedlings | 150,000 | 950,000 | 950,000 | 950,000 | Head Industrial Crops/ Horticulture |
| 2. | Cashew nuts: Distribute seedlings to farmers | 1 million seedlings | 150,000 | 300,000 | 300,000 | 250,000 | Head Industrial Crops/ Horticulture |
| 3. | Coconut: Distribute seedlings to farmers | 1 million seedlings | 150,000 | 300,000 | 300,000 | 250,000 | Head Industrial Crops/ Horticulture |

| 11. Increase fruit crop (avocado and mango) production from 1,207,868 to 1,645,276 metric tons per year by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | **Avocado:** Distribute seedlings to farmers | 3 million seedlings | 350,000 | 950,000 | 950,000 | 750,000 | Horticulture |
| 2. | **Mango:** Distribute seedlings to farmers | 1 million seedlings | 150,000 | 300,000 | 300,000 | 250,000 | Horticulture |

| 12. Increase annual cotton production from the current 29,000 bales to 200,000 bales per year by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Expand area under cotton production (rain-fed) | 549,400 acres | 83,600 | 129,600 | 150,600 | 185,600 | Head I/Crops |
| 2. | Expand irrigated land under cotton production (irrigated) | 78,376 Acres | 0 | 23,726 | 25,000 | 29,650 | Head I/Crops |
| 3. | Procure and distribute certified cotton seeds | 170 Metric Tonnes | 30 | 40 | 50 | 50 | Head I/Crops |
| 4. | Establish cotton produce collection centers | 300 Centers | 120 | 100 | 80 | 0 | Head I/Crops |
| 5. | Support access of machinery & accessories (Tractors) by farmers ,counties & S MEs by use of Innovative Commercial online Hire Service Voucher System | 84 Tractors | 24 | 30 | 20 | 10 | Head I/Crops |
| 6. | Develop model seed ginning facility | Ginning Facilities | 1 | 0 | 0 | 0 | Head I/Crops |

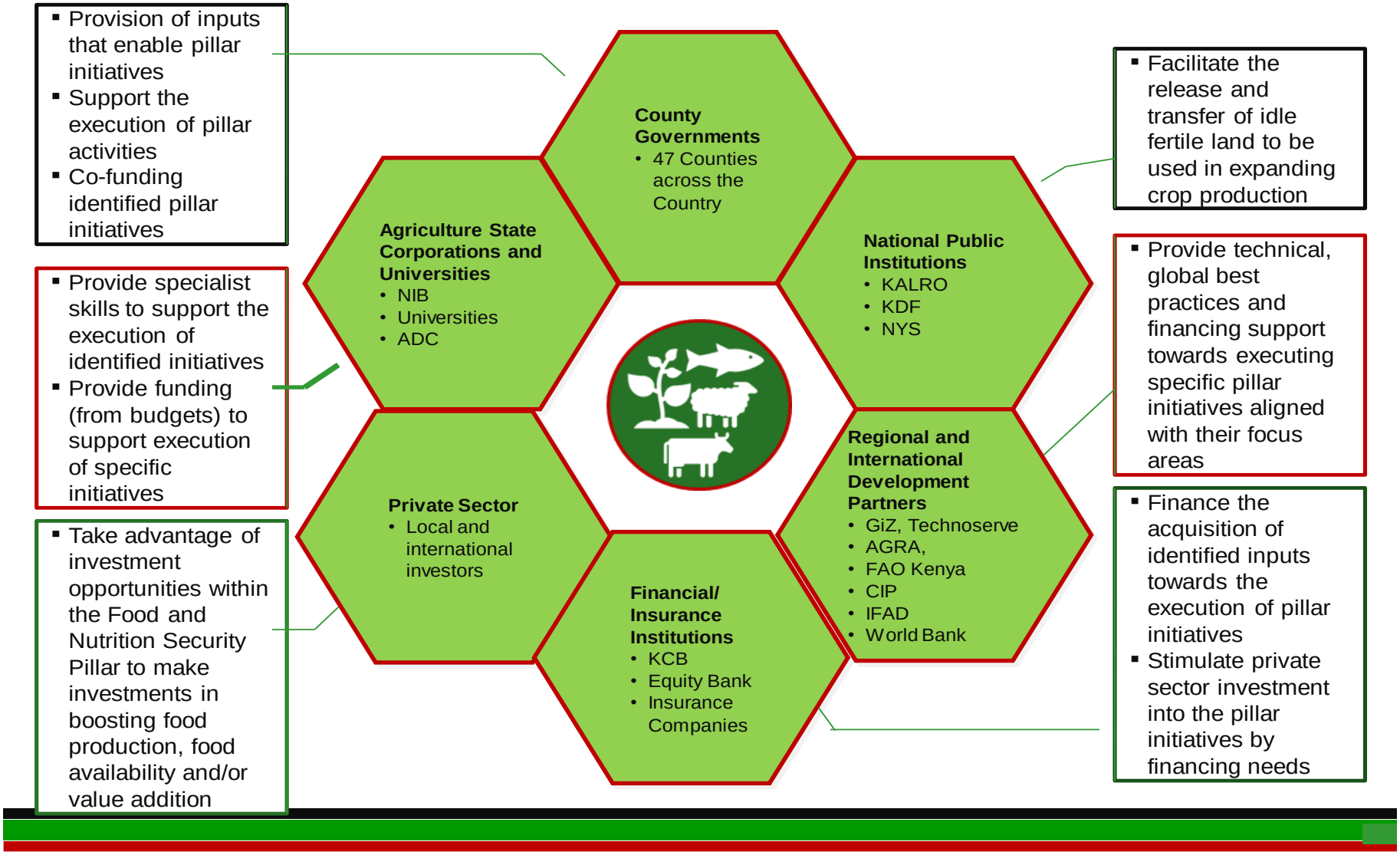
| 13. Increase annual coffee production from the current 40,000 metric tons to 100,000 metric tons per year by 2022 through productivity improvements | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Procure and distribute subsidized fertilizer | 282,625 metric tons | 25,000 | 57,250 | 85,875 | 114,500 | Head Fertilizer |
| 2. | Procure and distribute subsidized lime to correct soil acidity in 32 coffee growing factories | 112,500 metric tons | 56,250 | 56,250 | 0 | 0 | Head Fertilizer |
| 3. | Procure equipment, technical services and digitize/automate coffee factories for efficiency. | 1,000 coffee factories | 500 | 500 | 0 | 0 | Head Industrial Crops Commissioner Cooperatives |
| 4. | Procure equipment, services and modernize the Nairobi Coffee Exchange to streamline operations. | 1 Coffee Exchange | 1 | 0 | 0 | 0 | Head Industrial Crops |
| 5. | Rehabilitate 500 coffee factories | 500 Factories | 100 | 200 | 200 | 0 | Head Industrial Crops |

| 14. Increase annual hides & skins production from the current 59.6 million square feet to 72 million square feet per year by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Promote animal husbandry (feeding, animal welfare, branding) in Counties | 47 Counties | 10 | 20 | 32 | 47 | Director Hides & Skins |
| 2. | Promote bull schemes to improve on animal size (sahiwal & boran) | 4 schemes | 3 | 4 | 4 | 4 | Head Breeding |
| 3. | Capacity building of stakeholders in hides & skins | 47 Counties | 10 | 10 | 12 | 15 | Director Hides & Skins |
| 4. | Promotion of rural tanneries | 16 Promotions | 4 | 4 | 4 | 4 | Director Hides & Skins |
| 5. | Finalize six (6) hides and skin model centers of leadership to increase leather production. | 6 Centres | 6 | 0 | 0 | 0 | Director Hides & Skins |
| 6. | Establish leather science institute in Ngong (Kajiado County) | 1 Institute | 1 | 0 | 0 | 0 | Director Hides & Skins |
| 7. | Promote establishment of new tanneries to increase tanning capacity | 4 schemes | 3 | 4 | 4 | 4 | Head Breeding |

| 15. To enhance annual pyrethrum flower production and productivity from 300 metric tons to 3,000 metric tons per year by 2022 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Avail subsidized seedlings | 121 million seedlings | 33 | 44 | 44 | 0 | Head Industrial Crops |
| 2. | Avail subsidized fertilizer<br>a) Subsdized Fertilizers | 200 metric tons | 50 | 50 | 50 | 50 | Head Industrial Crops |
| | b) Acreage | 4,000 acres | 1,000 | 1,000 | 1,000 | 1,000 | Head Fertilizer |
| 3. | Avail subsidized driers for post harvest management | 40 Driers | 10 | 10 | 10 | 10 | Head Industrial Crops |
| 4. | Certify nurseries for pyrethrum seedling production in 19 pyrethrum growing counties | 19 certified nurseries | 3 | 5 | 5 | 6 | Head Industrial Crops |

| 16. Increase annual Tea production from the current 1.1 million metric tons to 1.6 million metric tons per year by 2022 through productivity improvements | | | | | | | |
|---|---|---|---|---|---|---|---|
| Critical Initiatives | | 2022 Target | 2018/2019 | 2019/2020 | 2020/2021 | 2021/2022 | Department/Owner |
| 1. | Procure and distribute subsidized fertilizer | 400,000 Metric Tonnes | 80 | 80 | 80 | 80 | Head Fertilizer |
| 2. | Equip technology incubation centre at KALRO Tea Research Institute | 1 incubation centre | 0 | 1 | 0 | 0 | Head AFA<br>Head KALRO |
| 3. | Procure and commission common user facility at Dongo Kundu special economic zone for access by SMEs. | 1 common user facility | 0 | 0 | 0 | 0 | Head AFA |
| 4. | Promote production of specialty tea for product diversification | 5,000 Metric Tonnes | 1,500 | 2,500 | 3,500 | 5,000 | Head Industrial Crops |

## 5.0 IDENTIFIED AND SEGMENTED CRITICAL STAKEHOLDERS



# 6.0 BIG 4: FOOD AND NUTRITION SECURITY IMPLEMENTATION STATUS

## 6.1 Policies, Bills and Regulations

### 6.1.1 Policies

a) **Agriculture Sector Transformation Growth Strategy (ASTGS) - finalized ASTGS** is aimed at **transforming sector interventions** to
   - ❑ Increasing farmers' **income**
   - ❑ Agricultural **output,**
   - ❑ **value addition and**
   - ❑ **Boost** farmers **resilience**

b) **National Food and Nutrition Security Policy Implementation Framework** developed and shared with the Counties

c) **National Rice Development Strategy (2019-2030)**
   - ❑ Draft Strategy is ready for validation by stakeholders.
   - ❑ The Strategy Development is partly supported by JICA

### 6.1.2 Acts of Parliament

a) **Warehouse Receipt system Act 2019 (WRS)- Completed**

**WRS** is aimed at **providing framework** for **efficient produce storage services** and facilitate **price stabilization**

b) **Irrigation Act 2019-**

The Act is to provide sustainable framework for expanding area under crop production

### 6.1.3 Regulations

a) Crops (Irish Potato) Regulations – finalized,
b) Dairy Industry Regulations – finalized and submitted to Parliament
c) Crops (General) Regulations – Finalized
d) Sugar Import and Export Regulations- Finalized
e) Coffee Regulations – Finalized
f) Tea Regulations – Finalized
g) Crops Regulations (Horticulture)- Finalized
h) Pyrethrum and Industrial Crops Regulations- In the Process
i) Nuts and oil Crops Regulations – In the Process
j) Warehouse receipting regulations- in the Process

## 6.2 Crops, Livestock, Fisheries and Irrigation Production Achievements

The under listed achievements have been realized since the inception of the Big four FNS Agenda:

1. **Increased maize production** to **44 million** bags in **2018** due to favorable weather and Subsidized Agricultural input
    a. *Resulting to price reduction and stabilization of maize flour (Kshs 110 to 90 per 2 kg packet).*
    b. *Relatively low Maize production is projected in the current year due to delayed long-rains and erratic weather*
2. 11 maize driers operationalized ***to reduce post harvest losses*** in Uasin Gishu, T/Nzoia, Nandi, Narok, Bomet, Nakuru, Meru, T/Nithi, Kirinyaga, Makueni Counties
3. **Increased rice production** to **128,597** metric tons due to adequate water, good agronomic practices and increased acreage in **Lower Kuja, Bunyala, Hola, Bura**)
4. **2,100** metric tons of Potatoes basic Seeds produced to date at **KALRO Tigoni**
5. **12,000** metric tons of certified seed produced to date in **Narok and Nakuru Counties**
6. 1 ambient Temperature store in Anabukoi, Uasin Gishu and 1 Charcoal Cooled Store in Lelan Elgeyo Marakwet
7. **Fruits, Nuts and other agricultural tree seedlings** project launched and on track with over 2.5 million assorted seedlings **(800,000 nuts and fruit seedlings**) distributed in the long rains and some during 2019 Short rains rains
8. The **upgrading of the computerization** of the auction process is complete. The NCE has also engaged in a **networking programme** where its **linking the Counties** with the operations of the Auction floor such that they are able to follow the proceedings of the auction at the comfort of their counties. So far **5 Counties have been linked and screens installed in the Counties**. These Counties are: Nyeri County, Meru County, Machakos County, Kericho County and Bungoma County. Other two counties are at advanced stages of connectivity. This are Kirinyaga and Muranga
9. **Household Irrigation Water Storage p**roject launched and on track with **2,363** water pans complete with an estimated 1m cubic metres of water harvesting capacity
10. **193 coolers** installed with cooling capacity of about **1,500 litres/cooler/day**.
    **80 bulk milk coolers** (3000 litres capacity) supplied and installed to dairy groups and cooperatives to ensure more milk available for processing
11. **Livestock Insurance supported** through **90,060** Tropical Livestock Units insured under Gok subsidy to mitigate against **adverse effects of drought.**
    **Ksh 88 million** paid to **6,286 households** affected by drought in the **8 counties** (Garissa, Isiolo, Marsabit, Mandera, Samburu, Tana River, Turkana, Wajir) in **2018.**
12. Liwa Toni fisheries complex rehabilitated and 2 vessels (1 Long liner and 1 Trawler) reflagged to enhance fish processing and domestic industrial capacity deep sea fishing
13. Irrigated land under cotton expanded by **145** Acres in **Hola.**
14. Nairobi Coffee Exchange has already be registered as a Legal entity (Company).

## 7.0 IDENTIFIED AREAS OF COLLABORATION UNDER FOOD SECURITY

a) Availing land for Crop expansion through Public Private Partnership
b) Fertilizer Subsidy Distribution
c) Enhance Post Harvest Handling Facilities and Aflatoxin Control
d) Soil testing & Liming of acidic soils
e) Support access of machinery & accessories through use of Innovative Commercial online Hire Service System
f) Seed production systems
g) Availing subsidized seedlings to Farmers
h) Review National Agricultural Extension Strategy to capture devolved structure and Functions
i) Support Establishment of feedlots
j) GIS and Digital technology (weather, market information, access and management, agricultural data processing and management, technology dissemination )
k) Rehabilitation of fish landing sites

## 8.0 IDENTIFIED GAPS

The gaps have been identified in the following areas:

a) **Coordination Mechanism**
There is need to create effective **coordination mechanism for tracking and reporting** on food security achievements at both levels of government
b) **Capacity and Technological gaps**
There is need to address technological gaps identified during implementation (**Best agronomic practices, post harvest management technologies)**
c) **Resource Mobilization**
To implement identified interventions, resources are being mobilized from GoK, Private sector, development partners and farmer organizations. **However, so far, the resources are inadequate**
d) Low mechanization and automation of farm operations (uniform planting, weeding, threshing, irrigation systems,)
e) Lack of market analysis and financial viability of farm enterprises
f) Limited use of digital platforms to enhance efficiency
g) Inefficient Natural Resource Management practices (sustainable land, water and agroforestry management)
h) Limited use of sustainable bio-energy
i) Inadequate clean seed/planting material availability (potato, rice, THVCs,)

## 9.0 IDENTIFIED FOOD SECURITY WAY FORWARD

a) Invest in & sustain a robust sector inter-governmental collaboration for effective service delivery with Counties as bedrock of implementation:
b) Re-invigorate provision of farmer extension & advisory services
c) Invest in Demand driven Research & innovation
d) Strengthen Human resource component to support improved agricultural systems through recruitment and capacity building
e) Enhance Risk Mitigation and resilience building (adaptation) to climate Change impacts.
f) Strengthen digitization, integration of agriculture data, information and knowledge for informed decision making
g) Raise farmer incomes by enabling value addition and greater market participation through farmer based SMEs through socio-economic impact studies
h) More investment in infrastructural development in the rural areas to reduce transportation costs and enhance redistribution of food from surplus to deficit areas and avoid geographical shortages
i) Deliberate and targeted investment in mechanization and irrigation, especially for the Arid and Semi Arid Lands, in order to increase food production
j) Natural Resource Management (e.g. Integrated Soil Fertility Management practices, agroforestry,
k) Support to Seed production systems for improved access to clean planting material ( potato, rice, others)