



## GHG EMISSION REDUCTION AND ENHANCEMENT ASSESSMENT UNDER THE GHANA FOREST INVESTMENT PROGRAMME

### INTRODUCTION

High deforestation and forest degradation has been the characteristics of the High Forest Zone (HFZ) of Ghana in recent times. A study conducted during the preparation of the Ghana REDD Readiness Proposal in 2010 indicated that agricultural expansion particularly cocoa production accounted for 50% of this. A careful analysis of this phenomenon highlighted concerning underlying factors to this trend. Key among them was unfavorable tree tenure and benefit sharing regime, risk of crop damage during timber harvest, uncoordinated efforts by Government Agencies on the cocoa and forest mosaic landscape and many more.

Through the Ghana Forest Investment Programme (GFIP), there has been significant turn over in the fortune of the country in terms of forest loss.

### BASELINE INFORMATION ON TRENDS OF FOREST LOST IN THE GFIP INTERVENTION AREAS.

Prior to the inception of the projects under the Ghana Forest Investment Programme, consultants were recruited through the World Bank coordinated project “Enhancing Natural Forests and Agroforestry Landscapes Project” (ENFALP) to undertake deforestation and carbon baselines. Ghana has two systems of forest management, the Protected Areas System which gives management control of statutory reserved forests and wildlife parks to the Forestry Commission of Ghana and the Traditional Forest Management System where forests on private lands are owned and managed by the land owners.

As part of the sustainable forest management practices, Ghana has classified its permanent forest estate into two types. The open forests where tree canopy is between 15% and 59% and closed forests where the tree canopy is from 60% upwards. There are other land-use classifications as well and they include cropland and grassland. Below are the hectares of the various forest types and the baseline rate of deforestation as at 2014.

### EMISSION REDUCTION AND CARBON ENHANCEMENT UNDER THE GHANA FOREST INVESTMENT PROGRAM

#### BASELINE (2014)

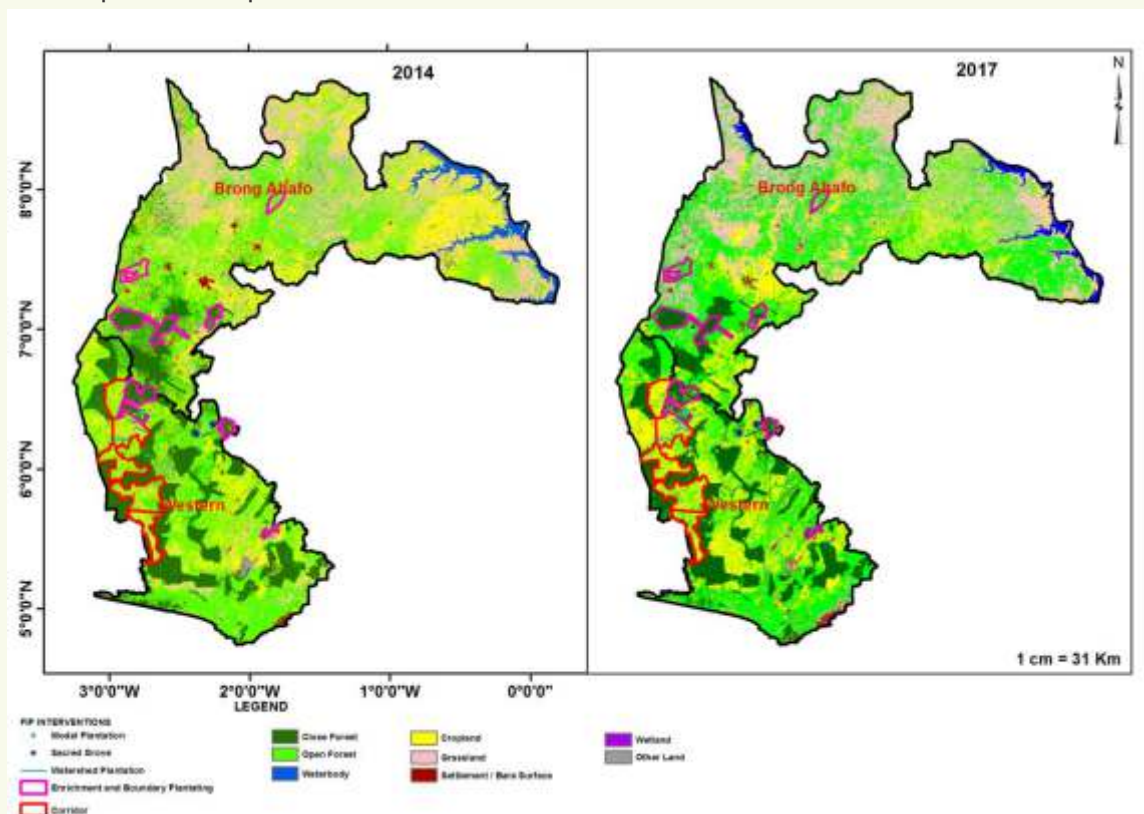
Landover	Area Ha	TCO <sub>2</sub> e/Ha	Total Carbon Stock
Close Forest	132,312.00	568	75,153,216.00
Open Forest	171,573.00	319	54,731,787.00
<b>Total for open &amp; closed forests</b>	<b>303,885.00</b>		<b>129,885,003.00</b>

#### Current status of Forests in the Intervention areas (2017)

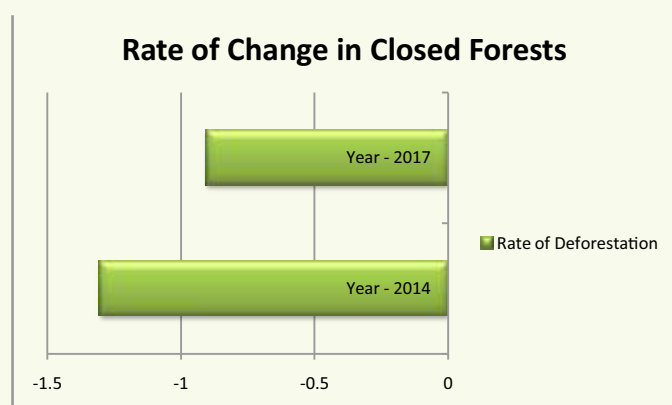
#### ACTUAL CARBON STOCK (2017)

Landcover	Area Ha	TCO <sub>2</sub> e/Ha	Total Carbon Stock	Remarks
Close Forest	132,121.19	568	74,476,837.06	Annual deforestation rate = -0.9
Open Forest	173,631.88	319	55,388,569.72	Annual deforestation rate = 1.2
CREMA Area	37,225.00	17	632825	
<b>Total Enhancement for the three landuse</b>	<b>341,978.07</b>		<b>130,498,231.78</b>	

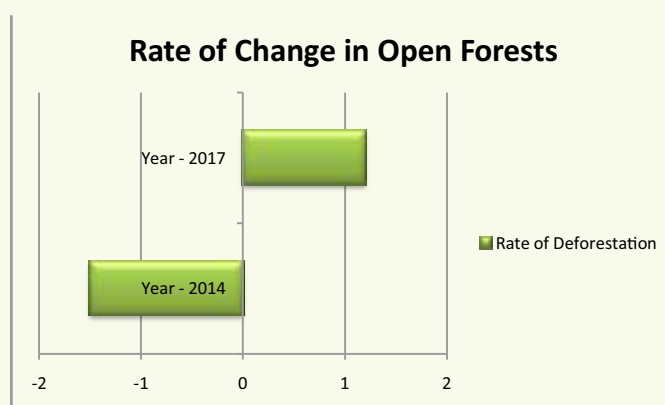
At midterm of the implementation of the GFIP, the Resource Management Support Center, the technical wing of the Forestry Commission of Ghana, was tasked to lead a team of experts from the sector to put together a carbon assessment report. As part of the report, current rates of deforestation compared to the baseline studies were assessed, the emission reductions due to the changes in the rates of deforestation and the business as usual (BAU) scenario was also assessed in the main classified forest types. Finally the increased in sequestration potential of the forest in these intervention areas were also estimated.



## Results Rate of Change in Forests 2017



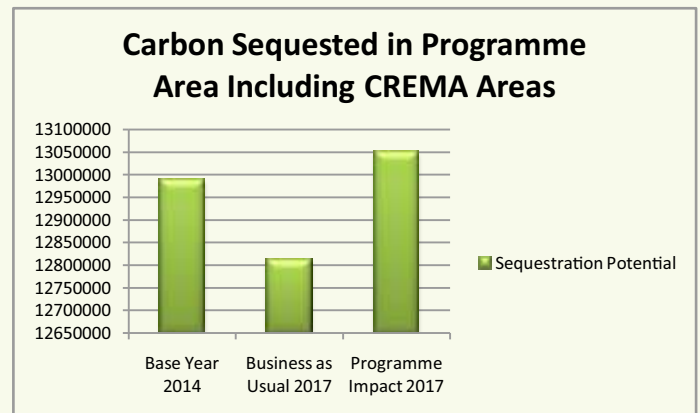
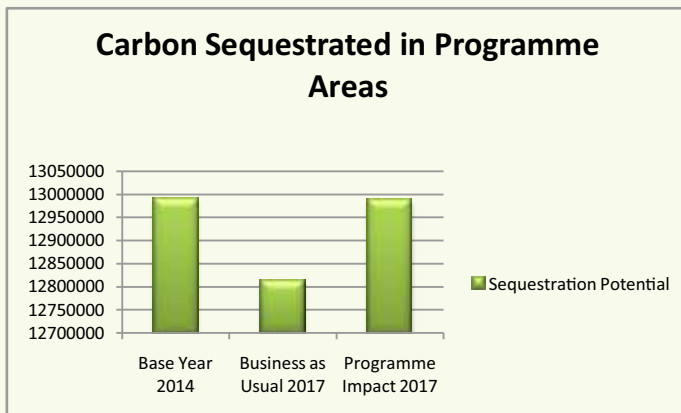
For closed forests, the baseline rate of deforestation in the programme area was 1.3% per annum as at 2014. The study revealed that the prevailing rate based on classification of 2017 images is 0.9% per annum.



For open forests, the rate of loss at the programme areas during the baselines study was 1.5% per annum. As at the assessment period, open forest was gaining at a rate of 1.2% per annum in the programme areas.

## Emission Reduction and Carbon Enhancement

Sequestration Potential in the programme area has increased compared to baseline and the business as usual scenario. Without the GFIP, the prevailing rate of forest loss meant that the sequestration potential of the High Forest Zone would have decreased from the baseline 129,885,003.00 TCO<sub>2</sub>e/Year to 128,111,784.9 TCO<sub>2</sub>e/Year. With the programme interventions, this has been averted and the sequestration potential has increased to 129,865,406.8 TCO<sub>2</sub>e/Year.



With the addition of the achievement in the CREMA enclave where farmers have maintained a total area of 37,225 ha as Climate Smart Cocoa, the sequestration potential has reached 130,498,232.78 TCO<sub>2</sub>e/Year

## FACTORS THAT CONTRIBUTED TO THE RESULTS

Under the Investment Programme in Ghana, calculated and interrelated interventions have been put in place to address the underlying causes of the deforestation and with the buy-in of all stakeholders; the effects of these interventions are being witnessed on the landscape. Key among the interventions are:

**Innovative Reforms in Tree Tenure and Benefit Sharing** – among the underlying causes of the forest loss in the landscape was the fact that farmers who are predominantly migrants or do not own the land end up not getting benefits from the statutory fees collected when timber is harvested in the country though they played a role in the nurturing of these trees. The sharing formula considers the Traditional Authority/Landowners, the Local Government Authority and the Forestry Commission. This arrangement discourages the farmers to maintain trees knowing the associated risks with harvesting when they are allocated to timber contractors.

The reform though not complete has outlined clear benefits going to farmers who nurture naturally occurring trees on their farms and further reaffirms the fact that when you plant a tree you own it. Farmers understanding the principles of the policy reform, have adopted the management roles assigned them in this policy hence the impacts being felt on the landscape.

**Review of Compensation for Crop Damage During Timber Harvest** – linking to the reforms in tree tenure and benefit sharing, the project through participatory and consultative processes have built consensus among key actors on the direction of compensation for crop damage during timber harvest on farms. The approach and strategy used for the review process has engendered the support and buy-in of all stakeholders though the exercise is not complete and this has led to notable behavioral change on the landscapes with regards to removing trees from farms for fear of destruction of crops and inadequate payment of compensation during timber harvest.

**Improved Coordination and Communication between Government Agencies on the Landscape** – the leading Government Agencies on the landscape are Ghana Cocoa Board, Forestry Commission and the Directorate of Agriculture. In the past, these Agencies have worked parallel to further their mandate while indirectly and unconsciously thwarting the efforts of the other. This was evident in the kind of communication messages sent out by these agencies. Through the implementation of the Investment Programme, these Agencies have entered into a memorandum of understating and have aligned field based activities using established District Implementation Teams with representation from all the Agencies. This has harmonized their messages and farmers have gain more trust and confidence in the messages they put out leading to significant behavioral change on the landscape and the adoption of management practices being communicated by Government. Some of the management practices includes Climate Smart Cocoa and Agriculture, Planting Trees and Nurturing of Naturally Occurring Trees.

**Community Resource Management Area (CREMA) Concept** – acknowledging that Forest Fringe Community members are capable of supporting the Forestry Commission in sustainable forest management and in furtherance of the country's forest and wildlife policy which is keen on collaborative resource management, the Investment programme have established ecological corridors where management powers have been devolved to groups of community that have come together under the Community Resource Management Area dispensation. These groups have their own code of conducts and bye-laws as to the use of the common natural resources and this has contributed to the reduction in forest loss.

**Massive Awareness Campaigns and Sensitization Programmes** – in order for all the planned interventions to work and get to the local targeted groups, awareness and sensitization through community durbars, radio programmes, farmers field schools, drama and many others have played a key role in sending the key messages to the communities making it possible for these results to be achieved.

### **CONSOLIDATION OF THE GAINS AND AVOIDANCE OF LEAKAGES**

To ensure the results being witnessed is maintained and improved over the years, the Investment Programme is concentrating the resources on interventions that have shown results. Accordingly, the Programme is enhancing the capacity and skills of the targeted groups to continue the initiatives beyond the project cycle.

Another key area of focus is the wider dissemination of the lessons to other parts of the country and the need to ensure that there are no leakages in terms of forest loss or increased carbon emissions in non programme areas. To this end, the programme closely monitors the situation in areas outside the project jurisdiction through the day to day work of the Forestry Commission and the Ghana Cocoa Board. The Ghana Cocoa Board is spearheading the dissemination crusade by incorporating the lessons of the programme into their general extension work across the cocoa growing areas in the country. Furthermore, extension services which has been minimal within the Forestry Commission is being boosted by the preparation of a forestry extension manual and the training of key staff in that regard. It is believed that these initiatives would go a long way to safeguard the investments and ensure sustainability and widespread of the gains.

