EVALUATING THE CARBON DIOXIDE SEQUESTRATION IN THE TREES ON THE LANDMASS OF THE UNIVERSITY CAMPUS IN THE TEMPERATE AND TROPICAL REGION

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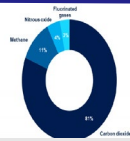Dr Metkel Yebiyo

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INTRODUCTION

Transport: At the end of 2017, there were 37.7 million licensed vehicles in Great Britain

Chat showing GHG emissions by gas in the UK, 2017

Courtesy: Independent News, UK (Gabbatiss, 2018)

Power: courtesy: Independent News, UK (Gabbatiss, 2018)

S/N	SECTORS	EMISSIONS (%)	2016-2017 % CHANGE	1990-2017 % CHANGE	Amount of 2017 CO_2 emissions (MtCO_2)
1	Transport	27	0	2	124.6
2	Energy	24	8	60	106.0
3	Business	18	2	30	66.1
4	Residential	16	4	16	64.1
5	Agriculture	10	1	16	5.6
6	Public	3	:	:	7.8
7	Industrial Processes	4	:	:	10.2
8	LULUCF	-3	2	88	-11.3
9	Waste management	1	1	69	0.3
	Total	100			373.4

STATEMENT OF PROBLEM & GOALS

➤ Need for energy to meet the world population (2.53 billion in 1950 to estimated 7.76 billion in 2020)
➤ Global warming & climate change
➤ Identify emissions sources by sectors
➤ Evaluation of the CO_2 sequestration capacity of trees on the University site, a smart way to limit GW
➤ Enhances the understanding of various carbon capture & Sequestration technology (CCS)

MATERIALS AND METHODS & ETHICS

Ethics

Awaiting approval

Location

Afe Babalola University, Ado-Ekiti-ABUAD & LSBU, & Southwark Council.

Equipment

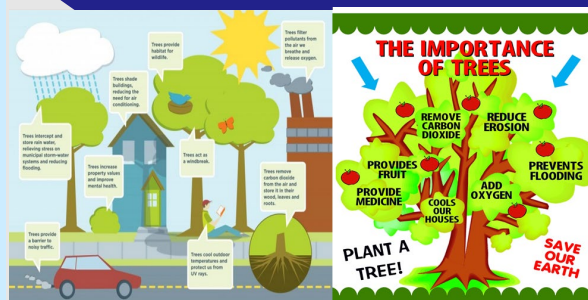Nikon Forestry Pro II Laser Rangefinder- 16703

Data Collection

Field measurement and Archive record

Data Analysis

➤ MS-Excel is used for the analysis & Modelling;
➤ i-Tree Eco model analyses tree benefits within the built environment

INDESPENSABILITY OF THE TREES

Do you know?

C accumulates in the air ate the rate of 3.5 billion tons/yr.

Tropical trees stores ~22.6 kg of CO_2; dependent of location, soil type, rainfall and species.
World known tree species by their scientific name are 60,065, where Brazil, Indonesia and Colombia are the nations with the predominant species.

CONCLUSION & THE IMPACT?

➤ This study enhances the understanding of CCS
➤ It compares the CO_2 sequestration capability of two climatic regions (tropic and temperate).
➤ Influence policy makers on the need for Universities to plant trees as a SMART way to offset its carbon footprint.
➤ The data collected for the selected location in this study will be added to i-Tree Model software for others to use, being absent in their database.

ACKNOWLEDGEMENT