



Strathmore
UNIVERSITY

STRATHMORE BUSINESS SCHOOL
MASTER OF MANAGEMENT IN AGRIBUSINESS
END OF SEMESTER EXAMINATION

MMA 8405: AGRIBUSINESS & ENVIRONMENTAL SUSTAINABILITY

Date: Thursday, 3rd February 2022

Time: 3 Hours

Instructions

Answer **Question ONE** and **any TWO other** Questions

Question 1 (Compulsory) (20 Marks)

- a. Analyze the sustainability framework for Agribusiness development in Africa to meet the nutritional needs of the blooming population across Africa. **(10 marks)**
- b. Discuss three technology applications for water efficiency in modern agribusiness. **(6 marks)**
- c. Analyze two major concerns that motivate the growing interest in renewable energy in both production and the agribusiness value chain. **(4 marks)**

Question 2 (15 Marks)

- a. Analyze the vulnerability of Africa to climate change. **(10 Marks)**
- b. Discuss the opportunities for circular economy in the African agribusiness sector. **(5 marks)**

Question 3 (15 Marks)

Use the script below to answer question 2 a.

“According to the report from the Food and Agriculture Organization of the United Nations (FAO) and the Water, Land and Ecosystems (WLE) program, the exploding demand for food with high environmental footprints, such as meat from industrial farms, and irrigation are contributing to unsustainable agricultural intensification and to water-quality degradation. This growth in crop production has been achieved mainly through the intensive use of inputs such as pesticides and chemical fertilizers. Today, the global market in pesticides is worth more than USD 35 billion per year. Some countries, such as Argentina, Malaysia, South Africa

and Pakistan have experienced double-digit growth in the intensity of pesticide use. Irrigation has more than doubled in recent decades, from 139 million hectares in 1961 to 320 million in 2012, transferring agricultural pollution to water bodies, and the total number of livestock has risen from 7.3 billion units in 1970 to 24.2 billion units in 2011 with high association to Green House Gases and climate change”. <https://www.fao.org/land-water/news-archive/news-detail/en/c/1032702/>

- a. Discuss the findings in this report in the context of externalities. **(6 marks)**
- b. Analyze why Climate Change is considered as a special externality. **(5 marks)**
- c. Analyze four key concerns that inform Climate change policy debates at the global level. **(4 marks)**

Question 4 (15 Marks)

- a. Highlight three policy instruments that can be used to improve the implementation of environmental policy in agribusiness across the Sub-Saharan Africa. **(6 marks)**
- b. Explain the application of environmental tax in enhancing environmental performance in the agribusiness industry. **(5 marks)**
- c. Discuss four limiting factors to implementation of environmental policy in African countries. **(4 marks)**