14th Annual International Conference on Industrial Engineering and Operations Management Dubai, United Arab Emirates (UAE), February 12-14, 2024

Publisher: IEOM Society International, USA DOI: 10.46254/AN14.20240158

Published: February 12, 2024

Addressing Sustainability in African Airports

Caroline K. Marete, PhD.

Visiting Assistant Professor
School of Aviation and Transportation technology
Purdue University
West Lafayette, IN 47907, USA
cmarete@purdue.edu

Abstract

Sustainable development is crucial to the continuity of our communities. The World Commission on Environment and Development (WCED) defined Sustainable development as development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs. The United Nations Sustainable Development Goals 9: Industry, Innovation, and Infrastructure highlights the importance of building resilient infrastructure, promotion of inclusive and sustainable industrialization and fostering innovation. Airports are essential facilities that provide the infrastructure necessary for safe air transportation of people and cargo. In addition, airports contribute to the local economies and global economy by providing employment and acting as economic drivers to the local communities. As is, there is no one accepted framework for incorporating sustainability projects in airport development projects. The sustainable development of airports is key to ensuring continuity of the global air transportation system. This study will explore sustainable development practices in African airports including the different approaches used by African airports to achieve sustainable development of the airport systems in Africa. The researcher will use case studies from various regions in Africa including Airports Company South Africa, Kenya Airports Authority, Morocco Airports Authority, and other airport operators to identify best practices on airport sustainability. The researcher expects to find that airports in Africa have adopted sustainable airport development practices. However, it is likely that these practices are not well documented because there is no one accepted framework for incorporating sustainability in airport development projects.

Keywords

Sustainable development, Airport, Africa, Air Transportation, Sustainability.

Biography

Caroline K Marete, PhD is a Visiting Assistant Professor in the School of Aviation and Transportation Technology at Purdue University, West Lafayette, Indiana, USA. Dr. Marete holds a PhD in Technology and Master of Science in Aviation and Aerospace Management from Purdue University, Polytechnic Institute. Dr. Marete has over 4 years' experience in the global aviation and aerospace industry having worked at the Boeing Company, Seattle; Kenya Airways, Nairobi; the International Civil Aviation Organization (ICAO), Montreal and Eno Center for Transportation, Washington DC. Her research at Purdue focuses on sustainable transportation systems, specifically airport sustainability planning; and aviation and aerospace education. Her work has been presented at various conferences including the Transportation Research Board (TRB) and University Aviation Association (UAA) and published in top journals such as the Transportation Research Record (TRR). In addition, Dr. Marete is a member of various professional organizations including the American Association of Airport Executives (AAAE) where she serves on the Young Professionals Committee, and the University Aviation Association (UAA). She is also a member of IEOM, ASEM, ASEE and UAA.