### Accepted Manuscript

### NEGATIVE IMPACT FROM THE APPLICATION OF NATURAL FIBERS

Oludaisi Adekomaya, Tamba Jamiru, Rotimi Sadiku, Zhongie Huan

DOI: 10.1016/j.jclepro.2016.12.037

Reference: JCLP 8612

To appear in: Journal of Cleaner Production

Received Date: 06 July 2016

Revised Date: 02 December 2016

Accepted Date: 09 December 2016

Please cite this article as: Oludaisi Adekomaya, Tamba Jamiru, Rotimi Sadiku, Zhongie Huan, NEGATIVE IMPACT FROM THE APPLICATION OF NATURAL FIBERS, *Journal of Cleaner Production* (2016), doi: 10.1016/j.jclepro.2016.12.037

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



#### NEGATIVE IMPACT FROM THE APPLICATION OF NATURAL FIBERS

Oludaisi Adekomaya<sup>1</sup>, Tamba Jamiru<sup>1</sup>, Rotimi Sadiku<sup>2</sup> and Zhongie Huan<sup>1</sup>

<sup>1</sup>Department of Mechanical Engineering, Mechatronics and Industrial Design, Faculty of Engineering and Built Environment, Tshwane University of Technology, Pretoria 0001, South Africa.

<sup>2</sup>Department of Chemical and Metallurgical Engineering, Faculty of Engineering and Built Environment, Tshwane University of Technology, Pretoria 0001, South Africa

(Corresponding author: adekomayao@tut.ac.za, oludaisiyetunde@gmail.com)

(Corresponding author Tel.no +27735106113)

#### Abstract

Natural fibre reinforced composites have been widely explored in many engineering applications in recent times due to its comparative advantages in terms of recyclability and sustainability. Of most interest in many engineering applications is its ability to offer lighter weight component as against synthetic and metallic materials. In recent times, metallic and synthetic materials are currently being replaced in many automobiles industries while natural fibre reinforced composites continue to enjoy reasonable patronage in this industry. In this study, the overall application of natural fibre was discussed with focal point on global consumption of natural fibre in automobile industries and its attendant implication on the environment and biodiversity. Part of the conclusions drawn from this study emphasised the need to preserve the nature from impending extinction.

Keywords: natural fibre; climate change; composite; energy saving; environment.

#### 1 Introduction

Natural fibres are a group of hair-like materials which primarily consists of plant and animal and its primary advantage revolves round the fact that it is environmentally friendly and more economically viable as against synthetic fibres. Natural fibres industry remains a huge market globally most importantly in automobile industries where natural fibre constitute about 40% of its raw materials (Reddy and Yang, 2005). This trend continues to put pressure on farmers to

Download English Version:

# https://daneshyari.com/en/article/5481129

Download Persian Version:

# https://daneshyari.com/article/5481129

Daneshyari.com