



## CUTLASSES TO DRONES: HOW NIGERIA'S RESTRICTION ON DRONE USAGE IS DELAYING THE BIRTH OF A TECH -DRIVEN AGRO ECONOMY

*"Intellectual innovation could only occur in the kind of tolerant societies in which sometimes outrageous ideas proposed by highly eccentric men would not entail a violent response against 'heresy' and 'apostasy.'"*  
**Joel Morky, American Economic Historian**

### Introduction

In 2015, Tanzanian authorities revealed that between 2009 and 2014, as much as 67,000 elephants were lost to poaching activities in the country.<sup>1</sup> To help in addressing the nation's poaching problem, Bat hawk Recon, a Tanzanian start up, began deploying drones to help provide the much-needed surveillance for tracking and apprehending elephant poachers. Zipline, an American robotics company has successfully aided the Rwandan government to reduce maternal mortality by deploying its drones to transport blood donations to inaccessible parts of the country.

Similarly, The ThirdEye Project in Kenya currently helps farmers reach informed decisions on how best to optimally utilise water, fertilizer and labour on their farms by flying sensor-equipped drones capable of detecting farm areas where these scarce resources are most needed.

The above are just but a few instances of the numerous benefits obtainable from drone application to societal challenges in Africa. Naturally, it would be expected that the Nigerian government like its African counterparts would similarly deploy drone technology to address peculiar challenges. To the disappointment of many however, the Nigeria Civil Aviation Authority (NCAA), in May 2016, placed seemingly tight restrictions on the usage of drone technology in the country. It is the argument in some quarters that the restrictions placed by the government are well founded considering that drone technology regardless of its positive applications in bettering mankind, can also be deployed for destructive, immoral and debauched ends. For example, CNN reported in 2019 that domestic drones carelessly flown at an airport in Gatwick, England

<sup>1</sup> Journal of African Elephants, 'Tanzania Reinforces Anti-Poaching Efforts'  
< <https://africanelephantjournal.com/tanzania-reinforces-anti-poaching-efforts/> > Accessed 23<sup>rd</sup>

affected, the flights of over 100,000 passengers.<sup>2</sup> Similarly, in what has been described as the ‘biggest drone conspiracy in history’ by British authorities, the BBC in 2018 reported the jailing of a 7-man gang following their conviction for using drones to transport drugs worth over £500,000 into a United Kingdom, UK prison.<sup>3</sup>

On the other side of the divide, the popular argument is that overbearing restrictions on the technology would only operate to deny Nigeria from exploring the numerous positive applications of drones in healthcare, education, trade and indeed agriculture, the focal point of this article.

### The Application of Drone Technology to Agriculture

Drones have been innovatively applied to farming practices and agriculture at large in a myriad of ways:

1. They are currently being utilised by mechanized farmers to analyse soil conditions with a view to improving crop yield, determining soil nutrient deficiency, amongst other things. This is typically achieved by equipping drones with sensors programmed to collect and analyse data upon which farmers can take informed steps targeted at improving soil conditions/quality (for example; mulching, planting cover crops and the introduction of organic matter for better soil quality).
2. In a faster and more efficient manner, planting is now being carried out by farmers who deploy drones to shoot seeds into the soil. DroneSeed, an American start-up is currently using this technology to plant more trees and cover more acres in its reforestation campaign in the United States, a feat not attainable when slower and more expensive manual labour was employed.<sup>4</sup>
3. Farmers are also using drones equipped with multispectral and hyperspectral technology (imaging technologies used to clearly define targeted objects) to detect and treat farm areas infested with pests, weeds and diseases. The use of drones in spraying farms to combat infestations also helps in reducing the risks associated with exposure from handling pesticides. Furthermore, with the data generated from drone flights over farms, farmers are not only notified of the mere

presence of maleficent infestations, but are also armed with the requisite data to determine uncertainties like the appropriate quantity of pesticides to use, proper cost estimations of pesticides required for treatment etcetera.

4. The use of drones for crop and livestock surveillance is perhaps the most innovative application of the technology. Sensor equipped drones can be used to observe individual plants to access both patent issues like damage to leaves and latent issues as poor photosynthetic rates. Amongst grazing livestock, the technology can readily be deployed to identify sick, lost or injured animals in a faster and more efficient means as opposed to relying on human inspection efforts.

### Nigeria’s Drone Usage Dilemma: Striking the Balance between National Security and Innovation.

On the 8<sup>th</sup> of May 2016, the NCAA announced restrictions on the use of drones in Nigeria. Of course in a democratic society as ours, the regulation of society is desirable to prevent a descent into chaos or as Thomas Hobbes best put it, “A state of nature where life was nasty brutish and short.” But popular concern is not with the regulation of drones, rather it is the difficulty of compliance with the swingeing restrictions that are unsettling. In relaying the restriction, Sam Adurogboye, a spokesman of the NCAA stated:

**“In recent times, RPA/UAV (Unmanned Aerial Vehicles) are being deployed for commercial and recreational purposes in the country without adequate security clearance. Therefore, with the preponderance of these operations, particularly in a non-segregated airspace, there has to be proactive safety guidelines.”**

Pursuant to the restriction, the agency went ahead to issue the **Guidelines and Requirements for Grant of Permit for Aerial Aviation Services (PAAS)** made pursuant to the **Nigerian Civil Aviation Regulations (Nig. CARs 2015 Part 8.8.1.33) and Implementing Standards (Nig. CARs 2015 Part IS.8.8.1.33)** as the pioneer guideline regulating drone usage in the country. Without further ado, below are the key excerpts of the above guidelines:

<sup>2</sup> Matt McFarland, ‘Airports Scramble to Handle Drone Incidents’ *BBC (Washington DC, 5 March 2019)*

<<https://edition.cnn.com/2019/03/05/tech/airports-drones/index.html>> Accessed 23<sup>rd</sup> November, 2020.

<sup>3</sup> BBC, ‘Gang Who Flew Drones Carrying Drugs into Prisons Jailed’ *BBC (England, 15 March 2018)* <<https://www.bbc.com/news/uk-england-43413134>> Accessed 23<sup>rd</sup> November, 2020.

<sup>4</sup> Isabella Lee, ‘Drones for Good: DroneSeed Uses Drones in Post-Wildfire Re-planting Project’ <<https://uavcoach.com/droneseed/>> Accessed 23<sup>rd</sup> November, 2020.

- Only companies registered with the Corporate Affairs Commission with a minimum share capital of at least N20,000,000 may make an application for a PAAS. The import of this requirement presupposes that individuals are excluded from applying for the said permit.
- The completion of a Personal History Statement by all shareholders having a 5% equity holding in the applicant company at the Headquarters of the State Security Service (SSS).
- Payment of a non-refundable application fee of N500,000 (five hundred thousand naira) to the Nigerian Civil Aviation Authority (NCAA).
- A waiting period of 6 months for the issuance of a licence/permit from the Airport Transport Licensing Committee of the NCAA.

Indeed, a major consequence of the NCAA guidelines on agriculture in Nigeria is obviously the untold hardship it would occasion on farmers intending to deploy drone technologies on their farms. For instance, consider how many farmers in Nigeria can afford to incorporate an agro company with a share capital of N 20,000,000? This rhetoric is gloomier upon the realization that 70% of farmers in the nation are predominantly subsistent farmers with barely enough resources to only farm and feed their selves and families.

Nonetheless, the fears of Nigerian authorities cannot be discountenanced considering the reality that when in the wrong hands, drones can be utilised to achieve negative ends and indeed constitute serious security challenges in societies. Considering that the nation is plagued by a legion of security threats, the government's strict stance can be understood. In reinforcing the position of the NCAA and further articulating the government's position on drone usage in the country, the National Security Adviser, Maj-Gen. Babagana Monguno (rtd.) in October 2018 stated<sup>5</sup>:

**“Members of the public are sternly warned against illicit acquisition of controlled items such as firearms, remotely piloted aircraft (Drones) and broadcast equipment amongst others. Accordingly, those with such illegally acquired controlled items**

**are hereby advised to voluntarily surrender them to the appropriate security agencies.”**

### The Way Forward

It is suggested here that the appropriate approach to be adopted by relevant authorities in engaging emerging trends, technology and indeed all novelty should not be abrupt bans or grim restrictions but constructive researches and consultations to ascertain the pros and cons of such. This is what is expected in any democratic and progressive society. For example, the European Union before the passage of its guidelines regulating drones (and even currently) put in place a platform (online) to accept all recommendations and suggestions for the effective regulation of the usage of drones amongst EU member countries.<sup>6</sup>

In a similar vein, Parliament in the UK conducted open consultations for suggestions on the regulation of Unmanned Aerial Vehicles, drones, in the country<sup>7</sup>. The consultations saw over 5,000 recommendations made to the UK parliament and has ultimately culminated in the Air Traffic Management and Unmanned Aircraft Bill on the floor of parliament.

Conclusively it is germane to note that in order for Nigeria to benefit from the boundless potentials that abound in the application of drone technology to Agriculture it must review the current draconian guidelines regulating drone flights in the country. Nigeria must have a reorientation targeted at changing its approaches to emerging trends as failure to do so would leave the country as one always playing catch-up to its contemporaries.

<sup>5</sup> Premium Times, 'Nigerian Govt Bans Unauthorised Use of Drones, Broadcast Equipment' *Premium Times (Abuja, 25 October, 2018)* <<https://www.premiumtimesng.com/news/top-news/292569-nigerian-govt-bans-unauthorised-use-of-drones-broadcast-equipment.html>> Accessed 25 November, 2020.

<sup>6</sup> European Union, 'Public Consultation On Drones (Unmanned Aircraft) – Technical Standards For Drones As A Product And Conditions For Drone Operations' <[https://ec.europa.eu/info/consultations/2018-drones\\_en](https://ec.europa.eu/info/consultations/2018-drones_en)> Accessed 25 November, 2020.

<sup>7</sup> Sean Daly, 'UK: New C-Drone Measures Announced; In Parliament, Transport Minister Calls For Life Sentence For Gatwick Drone Pilot' <<https://c-drone-review.news/en/2019/01/11/uk-new-c-drone-measures-announced-in-parliament-transport-minister-calls-for-life-sentence-for-gatwick-drone-pilot/>> Accessed 25 November, 2020.

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