

Considering the Regulatory Framework that Governs the Operation of Drones in South Africa

1 Introduction

The growing popularity and rapid rise of unmanned aerial vehicles (drones) across various industries raises myriad legal, ethical and safety concerns that require a comprehensive yet pragmatic legal framework for effective governance. South Africa, with its sophisticated legal infrastructure and rapidly advancing technologies, offers an ideal context for scrutinising and comparing legal frameworks governing drone operations.

This note examines the diverse applications of drones in various sectors, including private, commercial, recreational and military applications, in a context of rapid advancement in drone technology driven by artificial intelligence. The integration of drones into South African airspace brings to the fore unique challenges, including safety, security, privacy and airspace management. Existing regulations may not adequately accommodate such emerging issues in the near future. Therefore, a comprehensive re-evaluation of existing regulations is necessary if the regulatory framework is to remain relevant and effective, while accommodating rapid expansion in the country.

The note's key objective is to enhance the current drone legal framework. It comprehensively examines the regulatory framework governing the operation of drones in South Africa, and focuses on deficiencies in the current legal framework, offering valuable recommendations to tailor and refine it so as to yield comprehensive regulations that effectively govern the operation of drones in South Africa.

By shedding light on the strengths and weaknesses of the existing legal framework governing drones in South Africa, as well as the law in China, Japan, the United States of America (US) and Australia, the authors endeavour to provide insights that can inform policymakers, jurists, legal professionals and stakeholders on best-practice methods to shape an environment that fosters an integration of governance and management regulatory frameworks, for the safe operation of drones, into the fabric of an evolving modern society.

2 The growing popularity of drones

The use of drones in the commercial and corporate sector has grown exponentially. The global drone market in 2024 was estimated at 73.19

billion USD and it is expected to grow at a compound annual growth rate (CAGR) of 5,3 per cent per year to 130.1 billion USD by 2035 (Akre “Drones Market Research Report Information by Offering” (June 2025) https://www.marketresearchfuture.com/reports/drones-market-1124?utm_term=&utm_campaign=&utm_source=adwords&utm_medium=ppc&hsa_acc=2893753364&hsa_cam=20513279457&hsa_grp=153141660637&hsa_ad=672796300975&hsa_src=g&hsa_tgt=dsa2188716105342&hsa_kw=&hsa_mt=&hs (accessed 2025-07-17)). According to Forbes, a global media company, focusing on business, investing, technology, entrepreneurship, leadership and lifestyle, the introduction of autonomous flights in aerospace is in the early stage of regulation in Europe and the US, with the most common issues being limit of sight of the pilot, the ideal drone size, unreliability due to early-stage development and glitches, and questions over whether they are airworthy enough for people (Wyman “Why the Use of Drones Still Faces Big Regulatory Hurdles” (10 September 2018) <https://www.forbes.com/sites/oliverwyman/2018/09/10/why-the-use-of-drones-still-faces-big-regulatory-hurdles/?sh=283005c51c0d> (accessed 2023-12-10)). Conversely, Africa, with its complexity and the second highest population in the world, faces challenges such as limited regulations for security and safety, threat of hacking, difficulties in the proper integration of drones into navigation and surveillance systems, misuse of drones for warfare, and breach of privacy (Shearwater “Flying Drones in Africa: The Challenges” (undated) <https://www.shearwater.ai/post/flying-drones-in-africa-the-challenges> (accessed 2023-12-10)). Similar growth in drone use has been noted in South Africa, with revenue standing at R10 million for the year 2024 and an expected CAGR of 4,58 per cent over the next decade (Statista “Drones – South Africa” (undated) <https://www.statista.com/outlook/cmo/consumer-electronics/drones/south-africa> (accessed 2024-03-12)). The influx of cheaper and more affordable drones falling within the under-250g weight category has seen a dramatic rise of drones in private use. As of 2025, major commercial sectors using drones in South Africa are agriculture, security, surveillance and construction, amounting to a market value of 134.5 million USD (Mokoena, Daniyan, Mpofu and Abisuga “Development of a Framework for Improving the Turnaround Time of the Application Process at the South African Civil Aviation Authority” 2022 8(8) *Heliyon* 2).

There is no doubt that drones have gained popularity in South Africa across a variety of industries, demonstrating their adaptable and game-changing uses. The numerous applications for drones in the country emphasise their influence on sectors including agriculture, wildlife conservation, disaster management, and infrastructure development.

2.1 Agriculture

Drones have revolutionised precision agriculture in South Africa by providing farmers with accurate and timely data for crop monitoring, yield estimation, and pest management. Drones equipped with specialised sensors capture multispectral and thermal imagery, enabling farmers to identify crop health issues and optimise irrigation (Haghighattalab, Pérez, Mondal, Singh, Schinstock, Rutkoski, Ortiz-Monasterio, Singh, Goodin and Poland

“Application of Unmanned Aerial Systems for High Throughput Phenotyping of Large Wheat Breeding Nurseries” 2016 12(1) *Plant Methods* <https://doi.org/10.1186/s13007-016-0134-6>.

2 2 *Wildlife conservation*

In order to protect wildlife, drones are an essential tool. They help with wildlife research, habitat monitoring, and anti-poaching operations. With the use of these tools, rangers can survey large, difficult regions, follow animal migrations, and spot criminal activity like poaching. Drones have become a powerful addition to the ecologist’s toolkit (Hodgson *Using Drones to Improve Wildlife Monitoring in a Changing Climate* (doctoral thesis, University of Adelaide) 2020 https://digital.library.adelaide.edu.au/dspace/bitstream/2440/129637/1/Hodgson2020_PhD.pdf (accessed 2023-11-16) 20).

2 3 *Disaster management*

Drones play a pivotal role in disaster management and response, by facilitating the evaluation of damage, locating survivors, and organising rescue operations. These unmanned aerial vehicles assist authorities in monitoring water levels and assessing the impact of flooding on residents and infrastructure in flood-prone areas.

2 4 *Infrastructure inspection*

Drones have revolutionised infrastructure inspection, providing engineers with a safe and efficient means to assess the condition of critical structures such as bridges and power lines. This technology eliminates the need to endanger human lives during inspections. Aerial assessments conducted by drones enable engineers to identify maintenance requirements and potential hazards with increased efficiency.

2 5 *Media and entertainment*

The advent of drones has revolutionised the field of visual content creation, providing filmmakers, photographers and media professionals with the ability to capture breathtaking aerial shots. This innovation has introduced a new dimension to storytelling and visual content creation. Drones not only enhance the creative possibilities for professionals but also present cost-effective alternatives to conventional aerial cinematography methods.

2 6 *Delivery and logistics*

In urban and remote areas, use of drones is being explored for last-mile delivery of essential goods and medical supplies. Drones can provide timely

and efficient deliveries, especially in challenging terrains and during emergencies.

2.7 Challenges of increased drone usage

The widespread application of drones in South Africa is revolutionising industries across the spectrum, from agriculture and wildlife conservation to disaster management and entertainment. The versatility and efficiency of drones have transformed traditional practices, enhancing data collection, decision-making and operations in various sectors, and contributing to the country's technological advancement and development. With such high demand and increased necessity, and popularity of drones around the world and in Africa, the use of drones also comes with challenges regarding effective governance and management.

South Africa is among a few countries on the African continent to have implemented regulations on drone operations (part 101 of the Civil Aviation Act 13 of 2009). However, the regulations implemented in South Africa deal mainly with prohibition of drones in sensitive areas such as airports and private property and the prohibition of flying at night. However, the use of drones in businesses, industry and privately is rapidly expanding in South Africa.

Since 2015, commercial users have been required to obtain a Remotely Piloted Aircraft System Operators Certificate (RPASOC) involving five phases, namely pre-application, formal application, documentation evaluation, demonstration, and certification (South African Civil Aviation Authority Remotely Piloted Aircraft Systems (Part 101) Regulations Workshops (2015); Mokoena, Daniyan, Mpofu and Abisuga "Towards Strategic Management of Drone Application Process and Regulation in South Africa" 2022 33(4) *The South African Journal of Industrial Engineering* 177–196 <https://doi.org/10.7166/33-4-2691> (accessed 2025-10-08)). However, such a certification process is not in place for private/personal drone users in the country.

Operators are faced with widespread issues as they integrate drones into their business or leisure. Unfortunately, drone regulations and policy statements are complex and perplexing. In addition to drone regulations and guidance, there are myriad legal issues surrounding the operation of drones (Ayamga, Tekinerdogan, Kassahun and Rambaldi "Developing a Policy Framework for Adoption and Management of Drones for Agriculture in Africa" 2021 33(8) *Technology Analysis & Strategic Management* 970–987). An operator must navigate a quagmire of regulations to fly a drone legally without consequence.

There have been uncertainties on certain aspects of the drone regulations brought into effect in 2015 by the South African Civil Aviation Authority (SACAA). Uncertainty about the enforcement of fines highlights an important challenge (s 144(8) of the Civil Aviation Act (CAA) places the onus on the Director of Civil Aviation (DCA) to seek a court order to implement an administrative fine, in the absence of which the fine is rendered unenforceable if not paid by the transgressor). Other gaps in the drone legal framework include flying aircraft or drones over protected areas, such as a

nature reserve. The Protected Areas Act 57 of 2003 consider drones as aircraft that are not allowed to fly below 25 000ft. Part 101 of the CAA is silent about this restriction; as a result, flying a private drone above a restricted area or natural reserve is prohibited under the law. The presence of gaps within the existing regulations illustrates the need for further enhancements to the Act. It is essential to examine global challenges that currently exist and derive a sense of direction from other jurisdictions. This approach is vital to ensure that the regulations remain effective and relevant in the face of evolving technologies.

3 Gaps in the current drone legal framework

The Civil Aviation Act (13 of 2009) (CAA) seeks to ensure that the Director of Civil Aviation (DCA) provides the framework for all aviation regulations, which must be consistent with the International Civil Aviation Organisation (ICAO) standards and recommended practices (section 86–89). The CAA requires the Director to develop and issue aviation regulations consistent with the standards adopted by the ICAO. This responsibility is shared with SACAA. The CAA prescribes the maintenance of a safe and secure civil aviation environment as the primary objective of the DCA. The DCA must use appropriate means to ensure that aviation safety and security are maintained. The responsibilities of the DCA are outlined in Chapter 6, Part 3, Sections 85–93 of the CAA. Safety is a paramount issue in civil aviation, and the DCA is vested with considerable powers related to safety oversight. These powers must be implemented with fair judgement and without any form of bias. The DCA's power, which is fundamental to regulating change in improving safety standards, is the authority to issue and revoke licences and certificates. A sanctions or penalty decision can have profound effects, depending on its severity, and may have far-reaching consequences. The DCA's ability to impose sanctions and penalties for non-compliance has the potential to be a very effective tool to improve safety and security in the aviation industry in South Africa. However, implementation of this authority is hindered by the ineffectiveness of the sanctions.

This authority to impose sanctions and penalties is provided for in the regulations. Where the regulations are not adhered to, the DCA may take action through the courts. This will usually be in the form of fines or the suspension or revocation of aviation licences and certifications, which is a strong deterrent for non-compliance. Part 185.00.3 of the Civil Aviation Regulations of 2011 (Republic of South Africa 2015 Eighth amendment of the Civil Aviation Regulations, Part 101: Remotely piloted aircraft systems. GG No 38830 of 2015-05-27) established a monetary penalty system enabling an enforcement officer to impose administrative monetary penalties for offences referred to in Part 185.00.1. Part 185.00.1 declares a contravention of any regulation in Part 185 to be a criminal offence. The introduction of administrative penalties, along with the potential for certain infringements to be treated as criminal offences, shows potential for improving the governance and regulation of drone operators. However, it is crucial to recognise that these are separate processes that function

independently of each other, and the success of one does not guarantee success of the other. Not all penalties will lead to criminal prosecution, as several factors are at play. Successful prosecution hinges on variables such as the State's willingness to pursue such offences and the availability of personnel and resources for investigation and legal action. Despite the complexities involved, there is significant optimism surrounding this route. The Commercial Unmanned Aircraft Association of Southern Africa (CUAASA), in accordance with Part 101 of the CAA pertaining to drones and the regulations, has formally requested the South African Police Service (SAPS) to establish charge codes (CUAASA "RPAS Operations – Part 101: Enforcement Guide for Private Use & Illegal Operations" Revision 5 (March 2022)

<https://static1.squarespace.com/static/6294a31adfb39c164f28932b/t/6537a1cc3705c36b34ae8b1f/1698144720466/Enforcement+Guide+for+Private+use+%26+Illegal+Operations+v5+%281%29.pdf> (accessed 2024-04-11)).

Uncertainty arises when a transgressor fails, neglects or refuses to pay a fine or penalty. More is required to ensure the enforceability of the penalties.

In the South African context, uncertainty lies not only in the legal operation of drones in compliance with the regulatory framework but also in the enforceability of penalties imposed in terms thereof. From a practical point of view, it is difficult to foresee how SACAA (or any other authority for that matter) will ensure compliance with the regulations, given the restrictive nature/limitations of the enforcement mechanism. Section 144(5) of the CAA addresses the authority of the DCA regarding the enforcement of regulations. This provision grants the DCA significant powers to ensure compliance with aviation regulations, but the section's enforceability raises questions regarding the regulations effectiveness, fairness and potential for abuse. Section 144(5) states that the DCA may, despite and in addition to taking any step taken under the Act, impose an administrative penalty on any person for any failure to comply with the Act. Section 144(8) provides that if any person fails to pay an administrative penalty within the specified period, SACAA may, by way of civil action in a competent court, recover the amount of the administrative penalty from such person. One aspect to consider is the breadth of authority vested in the DCA under this provision. The language of section 144(5) appears to grant the DCA broad discretion in taking enforcement actions, including the power to suspend or revoke licences, certificates or approvals without providing detailed criteria or procedures for exercising such authority. Furthermore, the enforceability of section 144(5) may be compromised by the potential for abuse of power. Without adequate checks and balances, there is a risk that the DCA could wield their authority in a manner that is biased, discriminatory or unjust. This could undermine the integrity of the regulatory process and erode trust in SACAA.

Another key area of concern is the accountability of the DCA in exercising enforcement powers. Section 144(5) does not explicitly require the DCA to provide reasons for decisions or to afford affected parties an opportunity to challenge or appeal enforcement actions. This lack of transparency and due process protections could leave individuals or entities subject to arbitrary enforcement actions and without recourse. While section 144(5) of the CAA grants the DCA significant enforcement powers, its enforceability may be

subject to limitations and challenges. The lack of clear criteria, procedural safeguards, and accountability mechanisms raises concerns about the potential for abuse of power and the fairness of enforcement actions. Addressing these issues is crucial for ensuring effective and equitable regulatory oversight in the civil aviation sector.

Civil litigation, as envisaged by section 144(8), is fraught with pitfalls and challenges for the DCA to overcome. One of the most significant of these is the length of court proceedings. Cases often take years to resolve, leading to delays in justice and increased costs for litigants. The backlog of cases in South African courts exacerbates this issue, contributing to significant delays in the adjudication of civil disputes. Civil cases drag on for years (Mkhize “Dying To Be Heard – Gloomy Picture of the Slow Pace of South African Courts” *Daily Maverick* <https://www.dailymaverick.co.za/article/2025-04-09-justice-slow-sa-courts/> (accessed 2025-07-17)). Going forward, there may be a need for legislative reform in the form of a provision that expedites enforcement of the administrative fine. The solution may be to amend section 144(8) to provide that an administrative fine issued in terms of section 144, or any other relevant section in the CAA, has the effect of a civil judgment and to make provision for SACAA to be treated as a preferred creditor in respect of any money, fees, charges or levies collected on its behalf. Such an amendment would ensure that the administrative fines issued by the DCA were effective and enforceable.

Other notable gaps in drone regulation are found in the enforcement of regulations, particularly concerning individuals using drones privately without permits. SACAA faces challenges in enforcing Part 101 regulations in such cases. Currently, SACAA’s powers, as outlined in Part 101, lack the “teeth” needed for effective enforcement. One recommendation is to explore improving implementation of administrative fines, by providing them with a tool akin to a civil judgment. In addition, there is a significant question regarding the SAPS code for criminal prosecution and how SACAA can exert authority over private drone users. To address this, a compelling suggestion involves mandatory registration of all drones, similar to the registration requirements for motor vehicles. This approach could enhance accountability and oversight, filling a critical gap in the regulatory framework for drones in South Africa. South Africa can learn from other countries in addressing some of these gaps in the current legal framework for drones.

4 Lessons to be learnt from foreign jurisdictions

Despite the dynamic and evolving drone regulatory framework in South Africa, prevailing gaps require solutions from industry leaders. Countries with a wider drone market and comprehensive legal frameworks offer insight into solutions for South Africa. China and Japan are at the forefront of technological advancements. The US and Australia have drone-user markets that share similarities with South Africa. All these countries have seen significant growth in the adoption and use of drones across various sectors, including agriculture, construction, photography and public safety. In addition, these countries have developed regulatory frameworks to govern

drone operations, focusing on aspects such as registration, licensing and safety guidelines. Insight and guidance can be drawn from each country's experience to better inform others.

China's drone industry is experiencing accelerated yet robust growth, driven by cutting-edge technology, increased domestic and international demand across various sectors, and supportive government policies (ARC Group "China's Thriving Drone Industry" (9 June 2021) <https://arc-group.com/china-thriving-drone-industry/> (accessed 2024-04-11)). These factors collectively make China a leading global drone manufacturer. The DJI drone company is regarded as the world's leader in drone technology, with a market share of 70 per cent of the world's consumer drones and nearly 80 per cent of US consumer drones (Kashgar "World's Largest Drone Maker Expands in US Amid Rights Abuse Allegations" (14 March 2024) <https://www.voanews.com/a/world-s-largest-drone-maker-expands-in-us-amid-rights-abuse-allegations-7526613.html> (accessed 2024-04-03)). Like China, Japan has been at the forefront of using drones across various sectors, including agriculture, construction, logistics and disaster response. The Japanese government has also been actively promoting the adoption of drones through regulatory initiatives and investment in research and development (Imarc "Japan Drones Market Size, Share, Trends and Forecast by Type, Component, Payload, Point of Sale, End Use Industry, and Region, 2025–2033" (2024) <https://www.imarcgroup.com/japan-drones-market> (accessed 2024-04-12)).

Australia, as far back as 2002, was the first country to develop drone regulations (Norton Rose Fulbright "Rise of the Drones: Opportunity and Liability for Australian Businesses" (July 2016) <https://www.nortonrosefulbright.com/en/knowledge/publications/7b7067d8/rise-of-the-drones-opportunity-and-liability-for-australian-businesses> (accessed 2024-04-12)), and it has since developed a comprehensive regulatory framework for drone operations, including rules for registration, licensing and operational restrictions. The Civil Aviation Safety Authority (CASA) serves as the regulatory authority responsible for overseeing the safety of aviation-related activities in Australia (Australian Government "Know Your Drone – Drone Rules" (2023) <https://www.casa.gov.au/knowyourdrone/drone-rules> (accessed 2023-04-12)). Analysing the Australian legal frameworks can provide valuable insights for South Africa in developing or refining its own drone regulations. Australia has mechanisms in place for enforcing drone regulations and ensuring compliance through measures such as monitoring and enforcement. South Africa could learn from these enforcement strategies to enhance compliance with its own drone regulations.

Kitanovic reported that the US is recognised as a champion in drone innovation and regulation, stating further:

"The country is also famous for its FAA-issued regulations, vast opportunities for research and innovation straight from tech hubs like the Silicon Valley, a dense drone ecosystem, and more. This speaks volumes about the country's strong belief in tech and using drones for good." (Kitanovic "Drone Industry in the US: An Overview of a Game-Changer" (26 January 2022) <https://thedronesworld.net/drone-industry-in-the-us/> (accessed 2024-04-12))

A drone market such as that of the US offers valuable insights and guidance for addressing common drone-related challenges. In the US, it became imperative to have all drones fitted with an infrared transmitter so as to allow them to be identified in flight day or night. The rise in popularity of drones in South Africa requires the stringent monitoring of drones and accountability of their operators. The adoption of a mandatory requirement that all drones be fitted with an infrared identity tag is a welcome consideration.

The comparative study with other jurisdictions suggests that the South African Eighth amendment of the Civil Aviation Regulations, Part 101: Remotely piloted aircraft systems, (GG No. 38830 of 2015-05-27), reflects similarities with international regulations in areas such as maximum altitude allowed. Licensing, maximum weight and flying over public gatherings and private properties are other key areas. South Africa's regulations have striking similarities with those of China, Japan and Australia. The differences were identified mainly in relation to restricted zones and remote ID introduction, night-time flight and flying over people. Introduction of remote IDs for registration and licensing of drones is already implemented in China, Australia and Japan for better security and safety. Night-time flying is completely prohibited in South Africa, whereas countries like Australia and Japan have introduced special training and illumination to allow night-time flying. In addition, restricted areas and flying over people or private property in South Africa seem to be regulated comparatively more strictly compared to other countries, and such instances directly contribute to higher costs associated with drone operations in the form of penalties, making it difficult for operators to adapt. The time is right to introduce new, improved drone legislation to fall in line with other countries like China, Japan, Australia and the US.

5 Recommendations

An analysis of the current legal framework on drones reveals several gaps in the current regulatory framework, including limited provisions for addressing unregulated use of AI-enabled drones, inadequate safeguards for privacy and data protection, and the need to improve the use of drones by relaxing an overregulated legal framework. In addition, the note establishes an anomaly created by the classification of drones in the South African context. An operator who flies a drone for private use does not require an operator's licence, nor needs to have the drone registered, provided the operator operates within the confines of the terms of private use. (The terms for private use include prohibition of the use of the drone for commercial interest or gain, and obligations not to endanger the safety of another aircraft or person, and not to fly 50m or closer to any person or group of persons without their consent, near manned aircraft, 10 km or closer to an airport, helipad or airfield, or in controlled, restricted or prohibited airspace. Vermaak "Drone Regulations in South Africa" (undated) <https://www.martinvermaak.co.za/drone-regulation-in-south-africa/> (accessed 2024-01-26)). Modern, technologically advanced drones are equipped with powerful still photography and video cameras, enabling the operator to record or stream

video anonymously. This capability to operate for private use, without having to disclose one's identity, opens the door to abuse, invasion of privacy and violation of other human rights. Interestingly, the consequence for such conduct is not regulated in existing drone regulations. This gap justifies a move to requiring all drones to be registered at the very least. There is also a gap in the present regulations that empower the DCA with the authority to issue administrative fines. This authority is circumvented by the DCA's lack of power to enforce payment of fines. A closer examination of Part 101 of the CAA is warranted.

To address these gaps, first, a mandatory universal registration system must be applied irrespective of the drone's size or weight and be enforced by SACAA. (Subash Devkaran, SACAA Senior Manager for Certification, suggests that drones would need a registration record for both pilot and aircraft (Emma-Iwuoha "Drone Law or Regulations in South Africa | Get up to Speed" (4 July 2018) <https://www.michalsons.com/blog/drone-law-in-south-africa/16543> (accessed 2024-01-26))). Such a system would uphold the rules of a structured and accountable airspace in the country. A standardised drone-registration process would ensure that each drone operator is responsible for their actions, prompting effective and responsible drone ownership and usage. This would regulate drone usage with effective tracking, while contributing to enhanced safety and security. Secondly, apart from registration, all drones should be manufactured or retrofitted with remote identification transmitter devices. This would be a major improvement, allowing for tracing drones in real time by respective authorities and would enhance accountability and aid in incident investigations. Such laws have already been implemented in Australia, China and Japan. Australian laws have improved the regulations to relay both broadcast-based and network-based systems IDs for efficient management of airspace. In addition, it is evident that the regulation of camera usage in drones is essential to safeguard public privacy, particularly in the context of both hobbyist and commercial drone operations. The proliferation of drones equipped with cameras and powerful sensors raises significant concerns regarding the potential invasion of individuals' privacy rights. To address these concerns, it is necessary to introduce specific regulations governing the use and specification of cameras in Remotely Piloted Aircraft Systems (RPAS), ensuring that they are not equipped with invasive surveillance capabilities. In addition, amendments to the Protection of Personal Information Act (4 of 2013) (POPI Act) regarding drone usage are necessary to provide clear guidelines on the handling and protection of personal data collected during drone flights. Real-time tracking using retrofitted remote IDs will provide transparency in case of privacy breach investigations.

Thirdly, a relaxation of regulations concerning no-fly zones and flying times is required to provide drone users with some benefit and a healthy environment to grow their work and business. This will greatly benefit both government and the private sector, allowing for increased efficiency and future growth in case of emergency response, surveillance, entertainment and delivery services. Prohibiting drones from flying over people should be relaxed to allow businesses conducting delivery services to thrive in the near future. Drone operators who intend to fly during the night must undergo

additional training and licensing to familiarise themselves with low-light flying. In addition, drones should be fitted with illuminated lights to provide a clear line-of-sight for drone operators, as well as for the local public and other aircraft. Access to night skies would be instrumental in enabling both government and private security agencies to monitor criminal activities and search-and-rescue operations when necessary. Relaxation in both categories would greatly help photography drone users, along with the entertainment sector, simultaneously helping the local economy grow. However, a careful calibration of relaxation should be done, while keeping a balance between innovation and public safety.

Lastly, to enhance governance of drone operations in South Africa, and in so doing, improve the regulatory framework, an amendment to section 144(8) of the CAA is needed. Section 144(5) (with which section 144(8) is read) provides:

“(5) The Director may, despite and in addition to taking any step he or she may take under this Act, impose an administrative penalty on any person for any failure to comply with this Act.”

The current section 144(8) reads as follows:

“(8) If any person fails to pay an administrative penalty within the specified period, the Civil Aviation Authority may by way of civil action in a competent court recover the amount of the administrative penalty from such person.”

The unfortunate effect of section 144(8) is that, notwithstanding the competency of a designated officer (the DCA) to issue an administrative fine determined in accordance with the Civil Aviation Act Regulations (as upheld in the unreported case of *Airline Pilots Association v Khoza* [2016] ZAGPPHC 425 <https://www.saflii.org/za/cases/ZAGPPHC/2016/425.html> (accessed 2024-04-10)), the fine is ineffective if not rendered executable by a competent authority.

Section 300(3)(a) of the Criminal Procedure Act (51 of 1977) (CPA) stipulates that a compensation award made by a magistrates' court in terms of this section, shall have the effect of a civil judgment of that court and an award made by a regional court, shall have the effect of a civil judgment of the magistrates' court of the district in which the relevant trial took place. Drawing parallels with section 300(3) of the CPA, this approach provides a legal basis for the enforcement of penalties, ensuring that drone operators understand the importance of adhering to regulations. This measure not only bolsters the deterrent effect but also streamlines the enforcement process, empowering SACAA, the DCA or an authorised representative with clear authority to impose an administrative fine. The removal of the wording in section 144(8) in its entirety is recommended, along with a substitution of the following words: “Any administrative penalty imposed by the Director envisaged in (5) above shall have the effect of a civil judgment.”

These recommendations align South Africa with global drone regulation standards, modernising the existing industry by creating an enhanced regulatory environment and accountable legal framework.

6 Conclusion

It has become clear that despite the existing regulatory framework, challenges and gaps are prominent in the drone industry. A notable challenge highlighted earlier is the weak mechanism for enforcement of regulations, particularly concerning individuals operating drones privately without permits. The rapid evolution of drone technology also presents challenges in keeping regulations up to date with industry advancements. Issues related to privacy, security, and airspace management also require ongoing attention and adaptation of the regulations.

The introduction of administrative penalties and the potential classification of certain drone-related offences as criminal offences signal a commitment to enhancing enforcement mechanisms. In addition, industry stakeholders, including CUAASA, have actively engaged with regulatory authorities to advocate for clearer guidelines and streamlined processes. Looking ahead, the future of drone law in South Africa is likely to involve continued collaboration between government agencies, industry stakeholders, and the public to strike a balance between innovation, technology and safety. As technology evolves, with drone usage expanding, regulatory frameworks must evolve accordingly to ensure safe and responsible drone operations.

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