International Research Journal of Innovations in Engineering and Technology (IRJIET)

ISSN (online): 2581-3048

Volume 8, Issue 4, pp 57-60, April-2024

https://doi.org/10.47001/IRJIET/2024.804007

Legal and Regulatory Framework for the Protection of Scientific Data in Guinea

[1]Amara CAMARA, [2]Mamadou Mouctarou DIALLO, [3]Binko Mamady TOURE, and [4]*Yacouba CAMARA

[1]Réseau Intranet/ Internet Universitaire et Scientifique, MESRSI, Conakry, Guinée
[2]Université Gamal Abdel Nasser de Conakry, Département Génie Informatique, Conakry, Guinée
[3]Université Gamal Abdel Nasser de Conakry, Centre Informatique, Conakry, Guinée
[4]*Institut Supérieur de Technologie de Mamou, Département Energétique, Mamou, Guinée
*Corresponding Author's E-mail: cyacouba90@gmail.com

***Abstract* - Faced with the growing importance of data security, this research aims to examine the Guinean legal and regulatory framework relating to the protection of scientific data. Through a systematic analysis of legal and regulatory provisions, enriched by interviews with key players in the academic and scientific community, the study evaluates the coherence and efficiency of legislation in Guinea with regard to international standards. Preliminary findings reveal the existence of notable progress but also significant deficits, particularly with regard to alignment with international data protection standards. On this basis, recommendations are put forward with the aim of improving the current legal and regulatory structure for optimal safeguarding of scientific data in the Republic of Guinea.**

Keywords: Regulations, protection, scientific data, legal framework, Guinea.

I. Introduction

In the current digital era, characterized by accelerated digitalization and global interconnectivity, the management and protection of scientific data are emerging as central issues for the international academic community. The proliferation of digital data, exacerbated by the advent of advanced technologies such as big data, artificial intelligence, and the Internet of Things (IoT), poses unprecedented challenges in terms of confidentiality, integrity and availability scientific information. These challenges are even more critical in academic and research environments where the free and secure flow of knowledge is essential to scientific advancement.

In Guinea, as in many developing countries, the adequacy between the technological infrastructures in place and the legal and regulatory frameworks for data protection represents a major concern. The higher education and scientific research sector, in particular, finds itself at a crossroads, having to reconcile openness and the sharing of knowledge with the imperative need to protect data against unauthorized access, manipulation or losses.

The objective of this research is therefore twofold. On the one hand, it aims to provide an exhaustive inventory of the Guinean legal and regulatory framework relating to the protection of scientific data, situating it in the broader context of international standards and practices. On the other hand, it seeks to evaluate the effectiveness of this framework in practice, by identifying the strengths and weaknesses of the current legislation. The following research questions will guide this study:

- What is the current state of the legal and regulatory framework in Guinea for the protection of scientific data?
- To what extent does this framework comply with international data protection standards?
- What are the main gaps in the Guinean scientific data protection system, and what recommendations can be made to remedy them?

By addressing these questions, this research intends to contribute to the existing literature on data protection in the scientific field and provide concrete avenues for strengthening data protection mechanisms in Guinea. This study is also intended to advocate for harmonization of legal and regulatory practices with international standards, in order to promote a safe, ethical research environment conducive to innovation.

II. Data and Methods

The methodology adopted for this study is based on a mixed approach, combining documentary analysis and qualitative interviews, in order to comprehensively understand the legal and regulatory framework for the protection of scientific data in Guinea. This methodological approach makes it possible not only to analyze the content of legislative and regulatory texts, but also to capture the perceptions and experiences of the actors involved in the field of scientific research.

International Research Journal of Innovations in Engineering and Technology (IRJIET)

ISSN (online): 2581-3048

Volume 8, Issue 4, pp 57-60, April-2024

https://doi.org/10.47001/IRJIET/2024.804007

2.1 Data Sources

The data sources for this research mainly include:

- Legislative and regulatory texts: Laws, decrees, and other official documents relating to data protection in general, and scientific data in particular, published by the Guinean government.
- International norms and standards: Documents and reports issued by international organizations such as the European Union (notably the GDPR), UNESCO, and the OECD, which define best practices in data protection.
- Academic literature: Research articles, theses, and literature reviews on data protection, with a particular focus on the context of developing countries.

2.2 Analysis Methods

- Content analysis: The selected documents will be subjected to a qualitative content analysis, aimed at identifying, coding, and categorizing information relating to the protection of scientific data. This analysis will identify the main themes, specific legal provisions, as well as possible gaps and ambiguities in current legislation.
- Comparison with international standards: The results of the content analysis will be compared to international data protection standards to assess the conformity of the Guinean framework and identify gaps.

Boundaries

This research recognizes certain limitations inherent to its methodology. First, the availability and accessibility of legal and regulatory documents may limit the scope of the literature review. Second, the perceptions and experiences of interviewees may be subjective and may not fully reflect the reality on the ground. Finally, the comparison with international standards must take into account the contextual specificities of Guinea, which may limit the generalizability of the recommendations.

Despite these limitations, this methodology offers a robust framework for assessing the legal and regulatory framework for scientific data protection in Guinea, providing a solid basis for informed and contextually adapted recommendations.

III. Results and Discussion

The in-depth analysis of the Guinean legal and regulatory framework dedicated to the protection of scientific data revealed several key results, which are discussed below in relation to the research questions stated in the introduction.

3.1 Presentation of the results

a) Compliance with International Standards

Our analysis shows that, although Guinea has undertaken significant efforts to modernize its data protection legislation, the current framework presents notable deviations from international standards, such as those set out in the European Union's GDPR. . Deficiencies were identified in terms of data subject rights, cross-border data transfers, and security measures specific to the protection of scientific data. These gaps suggest an urgent need to review and adapt existing laws to better protect scientific data in the academic and research context.

b) Gaps and Challenges

Major gaps identified include the absence of specific provisions for the protection of sensitive research-related data, a lack of clarity on the obligations of academic institutions as data controllers, and insufficient oversight mechanisms. and law enforcement. Additionally, a major challenge lies in the low level of awareness and capacity among researchers and academic institutions regarding data protection best practices.

c) Implications for Researchers, Academic Institutions, and Policy Makers

The results of this study have important implications for various stakeholders in Guinea. For researchers, a better understanding of the current legal framework is crucial to effectively navigate the complex data protection landscape and ensure compliance in their research activities. Institutions must not only strengthen their internal data protection policies and procedures but also offer dedicated training to their staff and students. As for political decision-makers, these results underline the urgency of revising and updating the legislation to fill the identified gaps, by aligning more closely with international standards.

3.2 Discussion

This research highlights the challenges and opportunities for Guinea in the area of scientific data protection. It is imperative that legislative efforts are complemented by initiatives aimed at increasing the awareness and technical capacities of relevant stakeholders. The adoption of international standards should not only be seen as a legal obligation but as an opportunity to improve the quality and impact of scientific research.

Furthermore, it is crucial to actively involve all stakeholders in the research sector in the legislative reform process, to ensure that the new provisions effectively respond to the specific needs of the scientific community. This

ISSN (online): 2581-3048
Volume 8, Issue 4, pp 57-60, April-2024
https://doi.org/10.47001/IRJIET/2024.804007

participatory approach could facilitate the adoption of more robust and sustainable data protection practices within Guinean higher education institutions.

Although progress has been made, significant efforts remain to be made for the Guinean legal and regulatory framework for the protection of scientific data to reach a level of maturity consistent with international requirements. The future of scientific research in Guinea will largely depend on the country's ability to effectively secure scientific data, essential to scientific progress and innovation.

IV. Conclusion

This study explored the legal and regulatory framework for the protection of scientific data in Guinea, putting it into perspective with international standards. The analysis reveals that, despite the establishment of a legislative infrastructure aimed at regulating data protection, significant gaps persist. These shortcomings mainly concern the absence of specificities relating to data protection in the context of scientific research, partial compliance with international standards, and a deficit in awareness and technical capacity within the academic community.

This research contributes to the understanding of the Guinean legislative and regulatory landscape regarding the protection of scientific data. By identifying gaps between Guinean legislation and international standards, the study highlights areas requiring urgent attention to improve the security and confidentiality of scientific data.

V. Recommendations

Based on the results obtained, several recommendations can be made to strengthen the scientific data protection framework in Guinea:

- Review and update of legislation: Adapt and modernize the existing legislative framework to include specific provisions for the protection of scientific data, drawing on international best practices.
- Capacity building: Develop training programs for researchers, academic staff, and policy makers to increase awareness and improve scientific data management.
- Establishment of supervisory mechanisms: Establish dedicated supervisory authorities or bodies with the necessary resources to enforce the regulatory framework and ensure effective data protection.
- Promotion of international collaboration: Encourage the exchange of knowledge and the adoption of international standards through partnerships with foreign institutions and organizations.

VI. Directions for Future Research

This study paves the way for several areas of future research, including:

- Comparative analysis: Conduct comparative studies with other countries, particularly those in the sub-region, to identify models of good practice applicable to the Guinean context.
- Impact assessment: Study the impact of data protection policies on productivity and innovation in the scientific research sector in Guinea.
- Researcher Perspectives: Deepen understanding of researchers' attitudes, perceptions, and needs regarding data protection to refine policies and practices.

The protection of scientific data in Guinea requires concerted action to fill current legislative and regulatory gaps. Through the adoption of targeted measures and cooperation with the international community, Guinea can significantly improve the security and confidentiality of scientific data, thereby promoting a safer and more productive research environment.

REFERENCES

[1] Union Européenne, Règlement (UE) 2016/679 du Parlement Européen et du Conseil du 27 avril 2016 relatif à la protection des personnes physiques à l'égard du traitement des données à caractère personnel et à la libre circulation de ces données (Règlement Général sur la Protection des Données, Journal Officiel de l'Union Européenne, 2016.

[2] Organisation de Coopération et de Développement Économiques (OCDE), Lignes directrices régissant la protection de la vie privée et les flux transfrontières de données à caractère personnel, Paris : OCDE, 2018.

[3] Protection des données en Guinée : « Ces entreprises ne sont pas guinéennes et ont leurs date center dans leurs pays d'origine », 2023.

[4] Julien Rossi et Jean-Edouard Bigot, Traces numériques et recherche scientifique au prisme du droit des données à caractère personnel. 4, CAIRN.INFO MATIERES A REFLEXION, 2018.

[5] Ibrahim Coulibaly, la protection des données à caractère personnel dans le domaine de la recherche scientifique, Thèse de doctorat, Université de Grenoble, 2011.

[6] Loi relative à la Cybercriminalité et à la protection des données à caractère personnel, 2016.

International Research Journal of Innovations in Engineering and Technology (IRJIET)

ISSN (online): 2581-3048

Volume 8, Issue 4, pp 57-60, April-2024

https://doi.org/10.47001/IRJIET/2024.804007

Citation of this Article:

Amara CAMARA, Mamadou Mouctarou DIALLO, Binko Mamady TOURE, and Yacouba CAMARA, "Legal and Regulatory Framework for the Protection of Scientific Data in Guinea" Published in *International Research Journal of Innovations in Engineering and Technology - IRJIET*, Volume 8, Issue 4, pp 57-60, April 2024. Article DOI https://doi.org/10.47001/IRJIET/2024.804007

****

