JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue

JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

EXAMINATION OF ENVIRONMENTAL PROTECTION UNDER SOUTH SUDAN'S PETROLEUM ACT, 2012

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Abstract

In South Sudan, business activities in the petroleum industry are regulated by the Petroleum Act, 2012. Environmental protection in the petroleum industry is a major concern that the country has grappled with in recent times. This study examines the adequacy of the environmental protection framework under the Petroleum Act. The study employed doctrinal research and analytical methods comprising a systematic collection of relevant legal resources for a doctrinal analysis and examination of environmental protection provisions under the Petroleum Act, with a view to determining the adequacy or otherwise of ensuring an enduring environmental protection system in South Sudan's oil industry. The study found that environmental protection under the Petroleum Act exists but lacks adequate enforcement mechanisms. If environmental protection in the petroleum industry is to be achieved, the Petroleum Act, as the major governing law in the sector, has to be the light bearer. The Petroleum Act should be strengthened to ensure proper monitoring, institutional capacity, and enforcement mechanisms for environmental protection provisions. It is further required to provide holistic guidelines for pollution control, hazardous substance management, including proper engagement of host communities in processes that underlie the determination of activities that will affect their environmental and social interests in respect of oil and gas projects to be executed in their community.

Key Words: Environmental Protection, Challenges, Petroleum Act, 2012, South Sudan, Ministry of Petroleum.

1. Introduction

South Sudan is rich in oil reserves and has recorded a noteworthy upsurge in petroleum business activities in recent years.[1] The business activities in the petroleum industry inevitably cause harm to the environment, especially in areas where these activities are carried out. Disturbing environmental pollution has notably been recorded in the Paloch Region, located in the Upper Nile Region, where Melut Oil Basin is found, housing blocks 3 and 7, where major oil exploration and production activities take place[2]. The Petroleum Act, 2012 majorly regulates petroleum business activities, but it also bears significant environmental provisions meant to address the environmental concerns arising from oil and gas exploration and production. Despite provisions on environmental impact assessments, pollution control, and waste management have been made but there is utterly the absence of proper monitoring and enforcement mechanisms, occasioning environmental degradation and public health hazards. As this study delves into an analysis of the extent of the legal framework, it is hoped that the recommendations from its findings will be a call to action by the Parliament and responsible regulatory bodies to strengthen the legal and institutional landscapes for effective monitoring and enforcement of environmental protection in the oil industry of South Sudan.

2. Methodology

The research applied the doctrinal and analytical methods of research. It adopted the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) design, covering the systematic gathering of legal resources for a doctrinal analysis. The importance of adopting the PRISMA design is to enable a comprehensive finding of relevant applicable legal resources and avoid partiality in selection. The research adopted primary and secondary resource materials, involving a logical gathering and complete assessment of extant legal, policy, and scholarly literature. Salient provisions of the Transitional Constitution of South Sudan and the Petroleum Act on environmental protection, as well as environmental regulatory authorities such as the Ministry of Petroleum and the Ministry of Environment and Forestry, were considered. The application of PRISMA's four-phase procedure- identification, screening, eligibility, and inclusion in the gathering and collation of search reports from distinguished institutions, textbooks, and articles from important databases of peer-reviewed guaranteed clearness and reliability in the logical examination of relevant applicable laws, institutions, policies, and literature to determine the adequacy or otherwise of environmental protection under the Petroleum Act. This equally helps in evaluating institutional practices, regulatory overlaps, and challenges, for the purpose of drawing references and making positive recommendations for resolving the challenges.

[1] World Bank "South Sudan Economic Update: Oil Dependency amidst Uncertainty" (2021). At https://openknowledge.worldbank.org/entities/publication/b77c422c-a072-56f5-8b7f-eb224a9c7c71

[2] International Crisis Group. (2022). "South Sudan's Oil Sector: Unrealistic Expectations, Hard Choices." https://www.google.com/search?q=International+Crisis+Group.+(2022).+%E2%80%9CSouth+Sudan%E2%80%99s+Oil+Sector%3A+Unrealistic+Expectations%2C+Hard+Choices.%E2%80%9D&oq=International+Crisis+Group.+(2022).+%E2%80%9CSouth+Sudan%E2%80%99s+Oil+Sector%3A+Unrealistic+Expectations%2C+Hard+Choices.%E2%80%9D&gs_lcrp=EgZjaHJvbWUyBggAEEUYOdIBCDE5OTFqMGo0qAIAsAIA&sourceid=chrome&ie=UTF-8

3. Environmental Protection Legal Framework under the Petroleum Act, 2012

The Petroleum Act is an important piece of legislation on petroleum business activities in South Sudan, covering matters relating to the protection of the environment in the sector. The enactment of the Petroleum Act in 2012 was calculated to enhance protection of the environment via proper regulated management, and to address the negative effects suffered by the sector after years of neglect.[3] The Act mandates the conduct of petroleum business activities in compliance with environmental protection under the law.[4] Fundamentally, it prescribes mandatory assessment of the environmental and social impact of a petroleum business activity as a condition precedent for a new area to be opened for exploration and production.[5]

a. Environmental Management Plans

It is statutorily required that prior to the commencement of petroleum activities, a licensee or a contractor must prepare an environmental management plan for the systematic implementation of the environmental requirements for the petroleum activities.[6] A checklist for the environmental management plan is outlined under Section 60 (2) of the Petroleum Act. Notably, it has to be based on the environmental impact assessment of the area, provide a summary of the studies undertaken to identify environmental hazards and to evaluate environmental risks relating to the proposed activity, and provide a list of all structures, facilities, equipment, and systems critical to environmental protection, and a summary of the system in place for their inspection, testing and maintenance among others.

b. Environmental Audits

As the world continues to experience increased environmental problems, the legal and regulatory landscape for conducting business has come under intense scrutiny, especially in the petroleum sector, which is considered to be a major contributor. One regulatory approach to addressing the problem is through the mechanism of environmental audits. Despite not defining what an environmental audit means, the Petroleum Act of South Sudan makes provision for environmental audits to be conducted on the activities of petroleum companies operating in the country. Section 60 (5) of the Petroleum Act provides for an expert to carry out an environmental audit on the environmental management of petroleum business activities. Although the legislation contains no express definition, this omission is not fatal. Comparative reference may be made to environmental regulatory frameworks in other jurisdictions. For example, under Ugandan law, an environmental audit is defined as ‘a systematic, documented, periodic evaluation used to determine how well specified projects or an organisation’s management system, facilities and equipment are performing in conserving the environment and its resources and conforming to the requirements of the law.’[7]

[3] Mark-Anthony J. “South Sudan: The future of oil production - what you need to know” https://www.linkedin.com/pulse/south-sudan-future-oil-production-what-you-need-know-johnson/ visited on 27-o4-24.
[4] Petroleum Act, Section 5o (1).
[5] Ibid Section 59 (1).
[6] Ibid Section 60 (1).
[7] See The National Environment (Audit) Regulations, 2020, Regulation 2 of the Republic of Uganda.

One major challenge lies with the scope of an environmental audit under the extant Law. Section 60 (5) seems to confine environmental audit to a company's environmental management plan, which is insufficient. Section 32 of the Draft Environmental Bill attempts to address this challenge by broadening the scope of environmental audits to cover not only the environmental management plan but also how an organization's equipment and facilities are tackling environmental challenges. This reverberates a necessity for enacting the Bill into law.

Another issue is regarding the authority responsible for appointing an expert to conduct an environmental audit. While section 60 (5) of the Petroleum Act designates the Ministry of Environment as the authority to carry out an environmental audit or appoint a competent person to do so on its behalf, the Ministry of Petroleum appears to have assumed these powers unchallenged. In 2022, South Sudan's Ministry of Petroleum awarded contracts to three companies to carry out a comprehensive environmental audit in the oil fields.[8] The award of environmental audit contracts was heralded as great news and long overdue, as communities living around the oil-producing fields have been complaining of environmental pollution, which poses health risks to the people and livestock.[9] This, however, does not obfuscate the risk of usurpation of powers or regulatory overlap, to put it in mild terms. The establishment of a specialized agency responsible for the environment, with powers to oversee environmental audits as is the case in Uganda,[10] will help reduce these instances of regulatory overlap.

The appointment of auditors to carry out environmental audits in South Sudan follows the laid-down procedure. This is mainly by way of an environmental audit tender. The award of environmental audit contracts is, therefore, a highly competitive process, at least in theory. In addition to the cost implications, proposals are also evaluated based on technical capacity and the bidder's understanding of the requirements of the laws and regulations on South Sudan's environment, as well as international environmental auditing standards. Environmental audit findings are generally presented to the authority that commissioned the audit, which is also expected to follow up on corrective measures to be carried out by the concerned companies. Despite its strategic relevance in ensuring compliance with environmental laws and regulations, environmental auditing in South Sudan suffers greatly from a range of factors, including political instability, poor infrastructure, and a deficit in expert knowledge.

Environmental audits are capital-intensive projects requiring heavy financing. This also calls for an elaborate legal framework both on the sources of funds and on how they are expended. Section 60 (5) of the Petroleum Act states in broad terms that: 'an environmental audit shall, when necessary, be performed on the environmental management plan at the expense of the licensee or contractor.' This means the financial responsibility for conducting an environmental audit rests with the companies themselves, even though the relevant regulatory agencies oversee the process. The problem, however, is the lack of an elaborate legal framework on how these funds are contributed and managed. This has caused strains in the process of carrying

[8] Energy Quest Magazine 'Audit Contracts to Three Firms' <https://www.energyquestmagazine.com/2022/09/17/ministry-of-petroleum-awards-environmental-audit-contracts-to-three-firms> accessed on 17-01-25.
[9] Ibid.
[10] In Uganda, this role is performed by the National Environment Management Authority.

out independent environmental audits in South Sudan. A major challenge has been the delay in the disbursement of funds to companies that are contracted to carry out environmental audits, resulting in environmental audit reports being withheld.[11] This calls for an elaborate legal framework specifying the procedure for oil companies to contribute funds for environmental audits. A preferred method would be the establishment of an escrow account, which serves as a repository for the funds destined for the environmental audit. This ensures that the funds are available on demand by the auditing companies.

c. Decommissioning and Remediation

Section 61 of the Act incorporates the 'Polluter Pays Principle ', which entails that the party who caused pollution should remedy the damage to the natural environment. Therefore, under the Act, a licensee or the contractor is liable for damages in respect to pollution without regard to fault. However, non-compliance with decommissioning requirements and remediation in the petroleum industry is a major challenge.[12] Decommissioning usually marks the end of an oil and gas project cycle, and includes restoration and remediation of installations, holes dug, and structures that are no longer useful in the business activities of the petroleum projects.[13]

Environmental remediation is an important aspect of the oil industry, requiring an appropriate legal and regulatory framework, as well as proper training for personnel both in implementation and in regulatory oversight.[14] In South Sudan, the process of decommissioning and remediation is largely governed by the Petroleum Act, which requires a pre-disclosed decommissioning plan. It is expected that the concerned petroleum company should be able to restore the affected land.[15] Failure to properly decommission petroleum wells and infrastructure can pose severe health, safety, and environmental risks to the public.[16] For instance, unplugged oil wells pose a significant danger to the nearby communities and their livestock.

Several challenges are, however, encountered in the decommissioning process. This includes protection of the workforce and the physical structure of the properties. It is important to note that dilapidated structures due to long-term usage constitute challenges during decommissioning.[17]Another challenge is the high expense and sophistication of projects, which sometimes lead to abandonment.[18] There is also the problem of poor regulatory enforcement and poor waste management arising from decommissioning.[19] All these boil down to the issue of the cost of decommissioning. In an attempt to address this issue, the law makes provision for the

[11] EyeRadio 'Environmental Audit Findings allegedly withheld over Arrears' <https://www.eyeradio.org/environmental-audit-findings-allegedly-withheld-over-arrears/> accessed on 20-01-25.
[12] Pierre- Marie Depuy & Jorge E. Vinuales International Environmental Law 2nd Ed. (UK, Cambridge University Press, 2018) 430.
[13] Salini Impregilo SpA 'An overview on the decommissioning process in the oil & gas sector' https://www.lexology.com/library/detail.aspx?g=06ad2b58-2646-4cbf-9c5f-f5de60145a41 accessed on 23-01-25
[14] Ibid.
[15] Ibid section 43.
[16] Magnus C. Abraham 'The Regulation of Decommissioning, Abandonment and Reuse Initiatives in the Oil and Gas Industry: From Obligation to Opportunities' (2024) *Journal of Energy and Natural Resource Law* 1.
[17] Ibid.
[18] Ibid.
[19] Bureau Veritas 'Exploring Decommissioning Challenges and Opportunities to Mark Decom Week 2024'< https://www.bureauveritas.co.uk/newsroom> :~:text=Some%20of%20the%20challenges%20include,can%20lead%20to%20project%20deferments)

creation of a Decommissioning Fund (DF) by a petroleum company after approval of a plan for the development and operation of petroleum business activity.[20] This must not just be a meagre fund, but such an account must be credited with money estimated to be sufficient to cover the decommissioning.[21]

In terms of structure, a DF is a single-contributor fund for own decommissioning obligations by an oil company. Whereas the Petroleum Act makes it mandatory for oil companies to establish a Decommissioning Fund, the Act does not spell out details of the structure, contributions, and most importantly, how the Fund should be administered. Under section 41, the Minister of Petroleum is granted powers to make regulations covering these matters.[22] Unfortunately, this is yet to be effected. Consequently, South Sudan does not have a comprehensive set of regulations on the decommissioning of oil and gas project sites. These regulations are long overdue, and it is incumbent on the Petroleum Minister to act fast to address this lacuna.

In South Sudan, the petroleum industry has caused a landslip with hundreds of open waste pits, where harmful waste, including water and soil, gathers.[23] This highlights failure to carry out proper decommissioning and remediation of the environment by oil companies operating in the country, thus making the case for a comprehensive set of decommissioning regulations more pressing.

Chapter XIV of the Act generally encompasses health, safety, and environmental protection. Pursuant to this, powers are bestowed on the Minister of Petroleum to make regulations for environmental protection, in fulfilment of which the Petroleum Health Safety and Environmental Management Systems and Plan Regulations 2015 were made, forming a vital component of the legal regulations on environmental protection in South Sudan.

4. Petroleum Health, Safety and Environmental Management System and Plans Regulations, 2015[24]

The Regulations were made by South Sudan's Ministry of Petroleum and Mining and came into effect on September 21, 2015. The Regulations require petroleum companies to: (a) develop a management system and plans, (b) carry out plans and programme audits, and (c) prepare and submit annual reports on the workings of the systems and plans.[25] The management structure is in two parts, namely, the Environmental Management System (EMS) and the Occupational Health and Safety Management System (OHSMS).[26] Further, companies must establish an organizational structure, document policies, and follow processes, procedures, and other elements of the management system.[27] Companies are also mandated to build a management system in compliance with the International Organisation for Standardization, ISO's standards model on environmental and safety performance, which requires companies to make policy, plans for policy implementation,

[20] Petroleum Act section 41.
[21] Ibid section 42.
[22] See also section 99 (k), Petroleum Act.
[23] OPBS 'South Sudan Ignores Reports on Oil Pollution and Birth Defects' <https://www.pbs.org/newshour/world/south-sudan-ignores-reports-on-oil-pollution-and-birth-defects> accessed on 23-01-25
[24] See, Petroleum Act, 2012, South Sudan, section 50(2)
[25] Nhial Tiitmamer "Making Sense of South Sudan's New Petroleum HSE Management System and Plans Regulations SUDD Institute Policy Brief II 2016 P. 3.
[26] Ibid.
[27] Ibid.

implement policy, evaluate and review the policy.[28] Companies that plan to start a new project must submit their management systems and plans to the Ministry of Petroleum and Mining within 60 days before commencing business, while companies with existing petroleum projects must submit their management systems and plans within 90 days from the date of the signature of the Regulations.[29] The 90-day timeframe applies to the current operating companies.[30]

The Department of Health and Environmental Safety of the Ministry of Petroleum oversees compliance with the Regulations. As such, the Department receives and reviews the health and safety management plans of contractors to ensure that the contractor conducts a comprehensive environmental baseline study that provides an understanding of the existing environment in the contract area.[31] In consultation with the Ministry of Environment, the Department initiates and coordinates strategic environmental assessment before the opening of a new area and carries out regulatory supervision to ensure that the health, safety, and environmental provisions of the Petroleum Act, 2012, and HSE Regulation 2015 are complied with by all who carry out petroleum activities.[32] It also inspects petroleum activities to ensure that the petroleum activities are carried out in accordance with the Petroleum Act, 2012, and in accordance with the health, safety and environmental terms and conditions of any applicable petroleum agreement, petroleum sub-contract or license.[33]
TheRegulations[34] create the following mandatory obligations on companies involved in petroleum business activities in South Sudan:

a. Duty to avert pollution and guarantee the safety of the environment

Regulation 7[35] mandates operators in the petroleum industry to safeguard petroleum operations by providing and implementing measures and systems for control of pollution, including air, water, and soil pollution, spill and leak management, and waste management. Hence, a general duty of care is created on the part of oil and gas operators in favour of the community, in line with international environmental law principles such as the prevention and precautionary principles. It is worthy to note that this systems approach adopted by the regulation requires institutionalized environmental management mechanisms, which is a major challenge due to the weak institutional capacity of the Ministry of Petroleum and the Environmental Protection Agency.

b. Duty to conduct a mandatory Environmental Impact Assessment (EIA)

By virtue of Regulation 8,[36] the conduct of EIA by petroleum operators, at their cost, is a condition precedent to the grant of a licence and commencement of petroleum operations. This practice resonates with international best practices and standards in International environmental law, for instance, IFC Performance Standards, and

[28] Ibid.
[29] Ibid.
[30] Ibid.
[31] The Ministry of Petroleum of South Sudan "Healthy and Safety Environment" https://www.mop.gov.ss/hse visited on 27-04-24.
[32] Ibid.
[33] Ibid.
[34] Ibid.
[35] Ibid
[36] Ibid.

upholds the principle of ex ante environmental control. However, there is no clarity as to the approval procedures of EIA reports and enforcement consequences under the Regulation.

c. Duty to create a Health, Safety and Environmental (HSE) Management System. Under Regulation 11,[37] petroleum operators are mandated to establish an HSE Management System to ensure a comprehensive, systematic and proactive approach in addressing issues affecting health, safety and environmental protection in all petroleum operations. This applies to all permits and environmental plans. Oil and gas operators must ensure compliance with the regulations, development plans, and environmental management plans.

However, regulatory institutions, including the Ministry of Petroleum and the Environmental Protection Agency, lack adequate capacity to monitor and enforce these provisions.

d. Duty to comply with International Standards

Oil and gas operators are required to comply with international standards relating to Environmental Management Systems, Quality Management, and Industry Guidelines. These requirements are a recognition and promotion of international laws and standards in domestic laws, thereby encouraging synchronization of global oil and gas practices. However, a monitoring compliance mechanism is lacking in this regard.

e. Duty to document Policy, planning, and risk management framework

Regulation13[38] provides for the internal governance of HSE systems, requiring oil and gas operators to document HSE policies and set goals for preventing environmental damage, reducing injuries and fatalities. It requires the operators to identify hazards and assess risks. This brings to the fore risk-based regulation, which represents a modern approach in petroleum governance. Internal reporting systems covering incident reporting and emergency response for hazards and incidents in order to develop preparedness and mechanisms for emergency response. Although these laudable regulations will enhance transparency and build a safety culture, the mechanism for compliance is lacking.

f. Develop and maintain systems for monitoring compliance with legal requirements and data systems for tracking incidents.

Operators are mandated to control and mitigate incidents of environmental damage, including the monitoring of compliance with legal requirements. The Ministry of Petroleum and Environmental Protection Agency lacks the technical capacity and sophistication required to enforce compliance in this regard.

[37] Ibid
[38] Ibid

g. Development and maintenance of Environmental Management Plans

Environmental Management Plans (EMP)[39] covering policies, objectives and procedures for control, monitoring and mitigation of pollution, including the control of technical environments addressing chemical use and handling, water treatment or re-injection, gas flaring and venting systems, water and discharge limits.

Consequently, it is evident that environmental protection under the Petroleum Act for the regulation and protection of the petroleum industry in South Sudan is scanty and lacking in basic provisions that enable proper implementation of the law. A study conducted by the South Sudan NGO Forum in 2015 unveiled that environmental protection in the Petroleum Act remains unenforced, with unabated environmental degradation.[40] It is anticipated that the National Environmental Bill, when passed into law, will quickly create a relevant environmental body to guarantee firm compliance with environmental standards in the petroleum industry in order to achieve environmental protection.

5. Challenges to the Realisation of Environmental Protection under the Petroleum Act of South Sudan

The lack of holistic guidelines for pollution control, hazardous substance management, and poor engagement of affected communities in decision-making processes are key trepidations militating against the realization of environmental protection in South Sudan.[41] These, together with unproductive compliance monitoring mechanisms, have worsened environmental degradation.

As a graphic representation of the level of the problem, the oil spill incident of 2013, which resulted in the discharge of an estimated 5,000 barrels of oil into the environment due to pipeline failure, stands out. This event led to weighty environmental contamination, ecological damage, and health hazards for local communities.[42] The poor response to such incidents highlights yet another weakness in the extant legal framework for the prevention and control of environmental catastrophes.

Similarly, the Ministry of Petroleum has recognized these problems. According to the Ministry, "Water pollution, land degradation, and biodiversity loss persist in posing major challenges to the sustainable development of the sector and the well-being of communities."[43] The petroleum industry in South Sudan has formed land sites of hundreds of uncovered waste pits, where hazardous wastewater and soil gather.[44]

In South Sudan, oil and gas exploration has several negative environmental impacts which have persisted,[45] despite the availability of machinery in the form of laws and agencies to govern the environment, raising a serious concern in terms of environmental law compliance. This disturbing trend calls therefore for a holistic

[39] Petroleum Health Safety and Environmental Management Systems and Plan Regulations, 2015, Regulation 16
[40] South Sudan NGO Forum note. 36
[41] Republic of South Sudan Ministry of Environment, 2012
[42] Pond, G., & Maxwell, D. "Breaking the Vicious Circle? South Sudan's Stumbling Path to Environmental Security" (2016) Vol. 5 Iss. 1. *International Journal of Security and Development* p.4.
[43] Republic of South Sudan Ministry of Petroleum, 2022
[44] Sam Mednic "South Sudan ignores reports on oil pollution and birth defects" (2023).
[45] 'South Sudan First State of Environment and Outlook Report 2018 23.

analysis of the existing laws and institutions and to chart legal pathways preventing, minimizing, remedying, and punishing actions that threaten or damage the environment.

6. Recommendations

For the realization of environmental protection in South Sudan under the Petroleum Act, 2012, both legal amendments and institutional reforms to enhance the regulatory enforcement of the laws. Provisions on environmental protection under the Act should be strengthened to include climate change obligations covering Greenhouse gas (GHG) limits, climate change mitigation and adaptation, emission reporting requirements and mandatory carbon management standards in alignment with international frameworks. There should be provisions on the frameworks for the management of Environmental Impact Assessments, Environmental Management Systems, and Strategic Environmental Assessment. Enforceable standards and penalties should be adopted to ensure compliance. The Act should be strengthened to create environmental funds such as pollution damage funds, environmental restoration funds, emergency response funds, and decommissioning funds with Environmental Fund Managers to ensure accountability. As a matter of law, there should be a mandatory requirement for continuous training and upgrading of the technical capacities of both personnel and regulatory institutions. Community and social safeguards should be strengthened by providing a mandatory Free, Prior and Informed Consent (FPIC) and continuous engagement with local communities, including transparent and accessible compensation and remediation mechanisms to improve recovery of compensation, restoration of livelihood and rehabilitation of the environment.

7. Conclusion

The Petroleum Act, 2012 of South Sudan clearly attempts to strike a balance in petroleum development and environmental sustainability by addressing environmental protection while chiefly regulating the oil sector. The study notes that, since the Act mainly regulates the oil and gas industry, which is affected by environmental degradation, the Act should be at the forefront of protecting the environment. Hence, matters of environmental degradation in the oil industry should be of great concern to ensure environmental protection. And to achieve environmental protection under the Act, in the oil industry, the Act needs to be strengthened to enhance regulation, build institutional capacity, enforce compliance, and incorporate international environmental standards and best practices that ensure the protection of the environment while securing sustainable development.

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