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Uranium Markets of Sahel: Competition, Strategies, Further Developments

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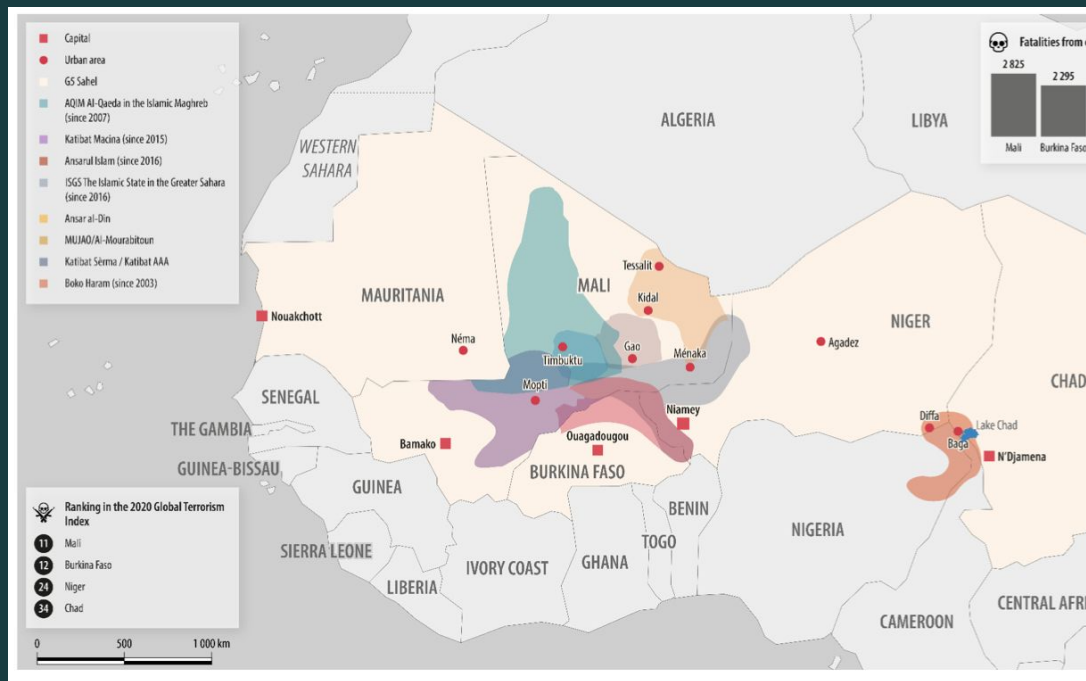
Research Project Design

1. The study focuses on the Sahel Five countries and their potential in uranium mining in the region.
2. It examines how the status and prospects for uranium mining have changed after the withdrawal of French troops.
3. It also considers peripheral countries Libya, CAR, and Sudan and their impact on overall security and supply chain security in the region.



Uranium Resources and Challenges in the Sahel Region

- The Sahel region holds significant uranium reserves, mostly at preliminary exploration stages.
- Currently, uranium is mined only in Niger, with confirmed resources (RAR) around 315,170 tons as of January 1, 2023.
- Extraction and exploration are highly challenging due to political instability and activity of terrorist groups.
- Uranium and gold mines are frequent targets of armed groups aiming to control resources and territories to fund activities and influence local populations, supporting the 'economy of conflict' in the region



Armed terrorist groups and territories under their control. Based on: New EU strategic priorities for the Sahel. Addressing regional challenges through better governance. Briefing, July 2021. URL: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/696161/EPRS_BRI\(2021\)696161_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/696161/EPRS_BRI(2021)696161_EN.pdf)

Risks Facing Mining Companies in the Sahel

- Foreign companies when entering the market must fully support infrastructure, logistics, and staff due to limited regional resources.
- High political risks due to political instability persist, especially for foreign mining firms
- Mining projects require heavy security investments for the entire extraction, processing, and transportation cycle.
- Sanctions on the the Sahel States Alliance (Niger, Mali, Burkina Faso) complicate supply routes, increasing risks of new restrictions.



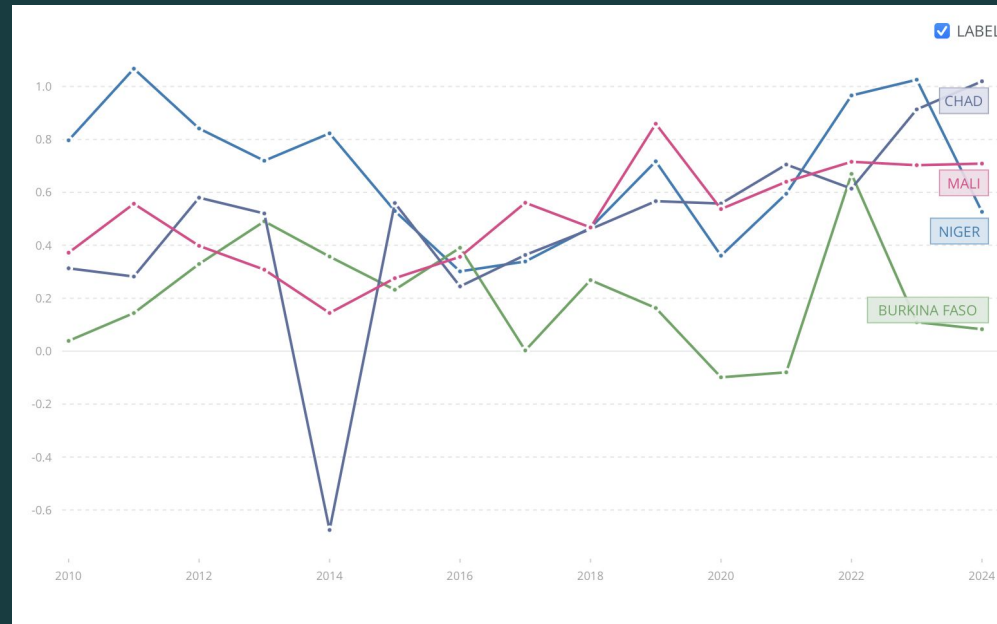
Common Economic Tendencies in the Sahel Region

- Slow and uneven economic recovery following recent coups
- Key sectors: agriculture hit by 2024 floods and droughts, mining and energy show mixed performance
- Agriculture damaged, causing output declines and inflation pressures, but gradual recovery expected
- Mining remains a major export source with expansions in gold, lithium; partnerships diversify with China, South Africa, other non-Western players. A few large projects in this spheres are expected to be launched within next 2-3 years.
- Niger's oil sector near capacity; new refinery project to boost domestic processing
- Infrastructure challenges persist: electricity shortages hinder growth and sectoral development, especially in Mali
- Humanitarian aid remains vital, but often used as a leverage of foreign influence in the countries. The Sahel countries show growing but cautious interest in aid flows from Russia and other non-Western partners, but still are majorly dependent from the Western aid



Common Economic Tendencies in the Sahel Region

- Investment inflows are volatile due to political instability: Mali and Chad cautiously recovering, Niger facing declines
- Sanctions are easing; border reopenings and trade restoration vital (e.g., Niger-Benin) with Chinese involvement
- Governments pursue fiscal consolidation, introduce new taxes, rely on IMF and regional monetary union support
- Inflation surged early 2025 due to energy and food price rises, expected to ease later in the year
- Overall security indicators in the region have generally worsened since 2022: terrorism, organized crime, weakened state institutions, unsecured borders, ethnic conflicts, forced migration, poverty, humanitarian crisis, etc.



Foreign direct investment, net inflows (BoP, current US\$) - Niger, Burkina Faso, Chad, Mali, 2010-2024

Major uranium sites in Sahel

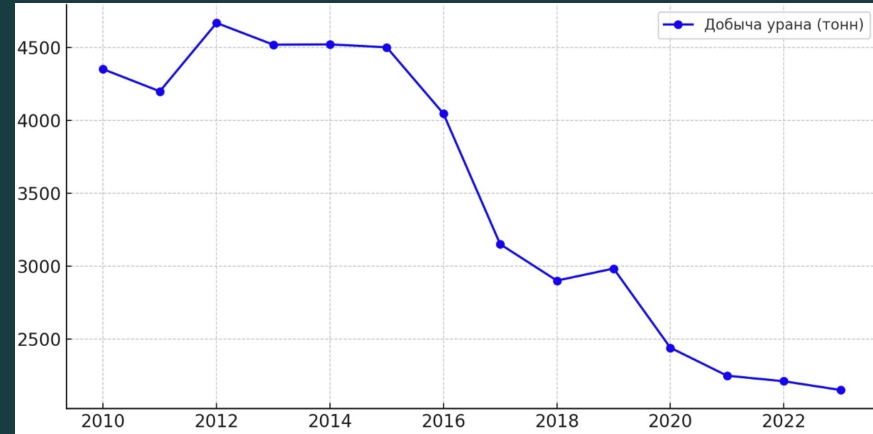
Currently, industrial mining is conducted only in Niger, but research results from various years confirm the presence of uranium in the rock formations of Mauritania, Chad, Mali, as well as Libya (Garian area) and the Central African Republic (Batuma deposit).

Mauritania: main areas are the Reguibat Shield. Industrial mining is absent due to investment and market difficulties.

Mali: projects include Falea and Tessalit.

Chad: uranium exploration has been carried out intermittently since the mid-20th century, but industrial mining is absent due to political instability and limited investment inflows. Currently, there is no information on active exploration activities. There is significant geological potential in the Tibesti, Kufra, and Hornofaji ranges.

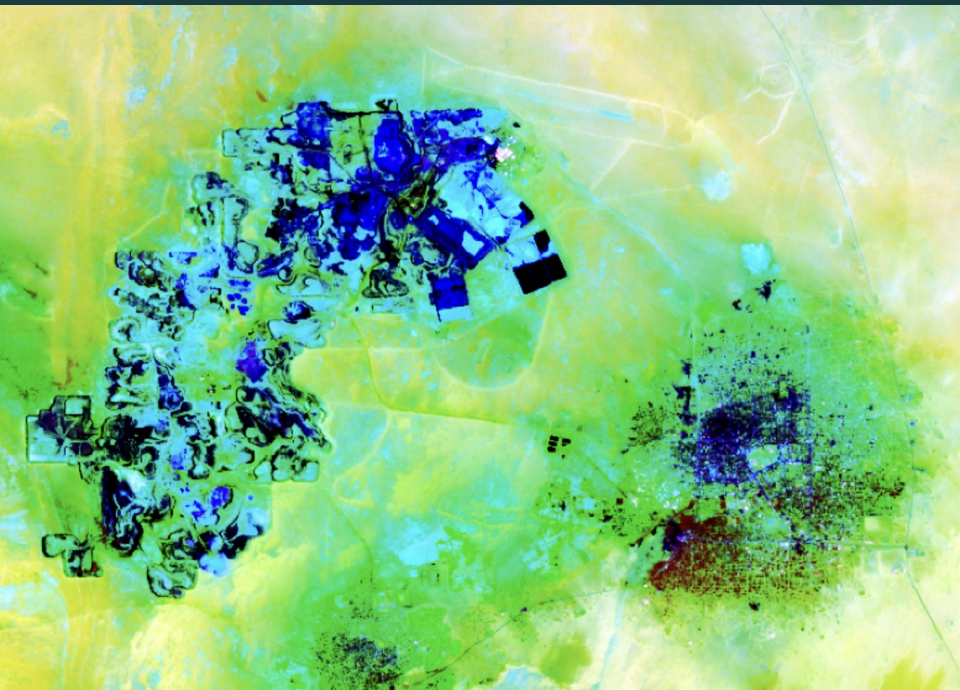
Burkina Faso mainly relies on gold mining, and no uranium has been found in the country to date.



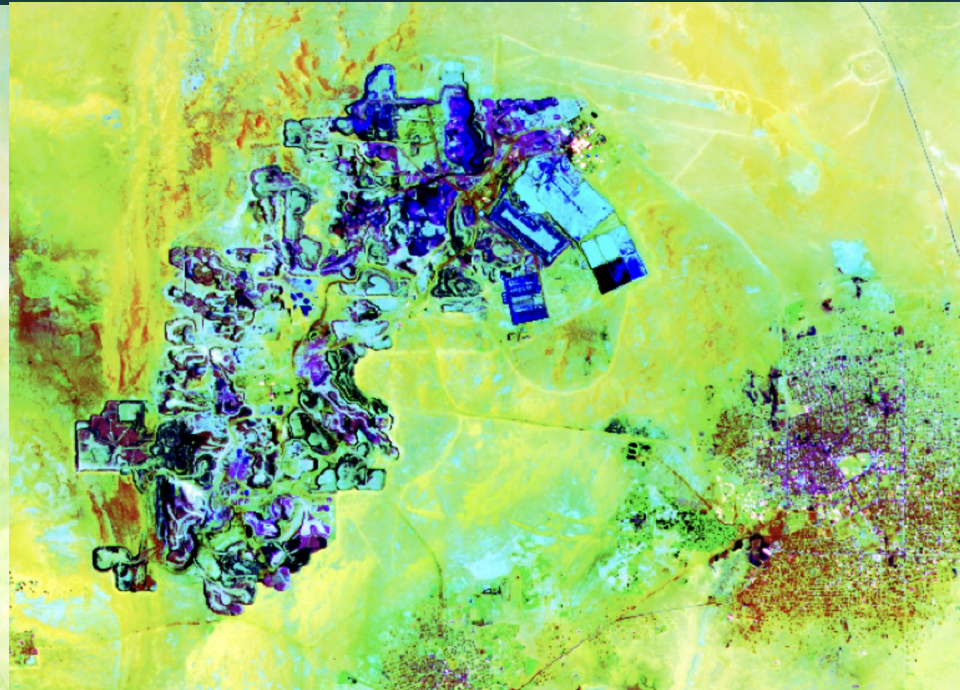
Uranium extraction in Niger (tons), prepared by the author based on data from the World Nuclear Association (WNA)

Prospects for uranium extraction for Russia

- Niger is the only country in the region openly seeking uranium exploration and extraction cooperation with Russia, inviting Russian involvement on its territory.
- All of Niger's uranium deposits are concentrated in the Tim Mersoï basin, a sub-basin of the Ilemmeden basin.
- The Tim Mersoï basin is located near the Arlit-In Azoua fault line, between the mining towns of Arlit and Akokan, approximately 900 km northeast of Niamey (over 1200 km by road).
- Current uranium exploration licenses in the basin belong to:
 - Chinese CNNC at the Azelik deposit
 - Canadian Global Atomic developing the Dasa uranium project (production expected to start early 2026)
- The Tim Mersoï basin holds large confirmed uranium reserves; most deposits are surface-near and suitable for open-pit mining, presenting significant commercial potential for Russia.



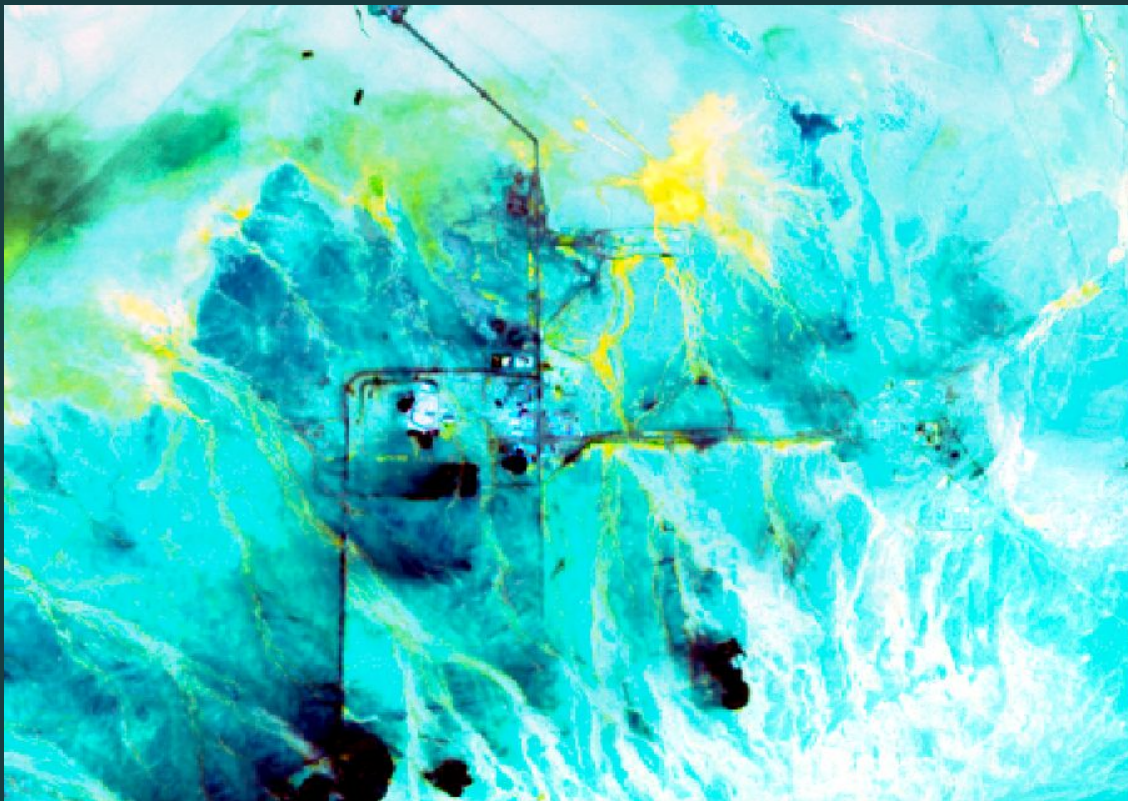
*Arlit uranium deposit, channel
composition 12-8-2, June 2023*



*Arlit uranium deposit, channel
composition 12-8-2, June 2025*

Prospects for uranium extraction for Russia

- Coordination with neighboring companies like CNNC is critical for:
 - Safety management
 - Infrastructure sharing
- CNNC's site has faced challenges due to underfunded water purification infrastructure and poor employee living conditions; coordinated infrastructure support could benefit both Russia and China.
- China's experience in sanctions evasion and logistics (e.g., managing the Niger-Benin pipeline during blockades) could support joint operations.
- Other uranium deposits in the region with potential include:
 - Falea deposit in southern Mali
 - Tibesti region in northern Chad
 - Mayo-Kebi in southern Chad
 - Bakouma deposit in the Central African Republic (CAR), where Russia already has transport infrastructure and a military presence.



*Azelik uranium deposit, channel
composition 12-8-2, July 2025*

Withdrawal of Western uranium mining companies from Niger after 2022

- Withdrawal of Western uranium mining companies from Niger after 2022
In June 2024, the Nigerien authorities revoked Orano's license to mine uranium in Imouraren and Arlit, triggering arbitration proceedings at ICSID over contract breaches and management interference. In response, Orano suspended rehabilitation work at the closed Akouta uranium mine site.
- The Canadian company GoviEx Uranium lost its license for the Madaouela deposit in Niger and also initiated arbitration.
- The American company African Discovery Group withdrew from the deal for the Ouricha-3 license in Niger at the end of 2024.



Positions of Other International Players in the Uranium Mining Market in the Region

- The Chinese SOMINA project, together with CNNC and Korean partners, is resuming mining at the Azelik deposit in Niger.
- Turkey signed a memorandum of cooperation with Niger in the mining sector in October 2024, but the details of the agreement are not disclosed.
- The Australian BOS Global Holdings Ltd is exploring uranium in the Tiris-Zemmour region in Mauritania.
- The Canadian African Energy Metals is exploring uranium at the Falea deposit in Mali.
- The Canadian Global Atomic maintains positions at the Dasa project in Niger, with mining start planned for 2026.

Legal Features of Mining

A three-stage subsoil use system applies in all five countries: initial exploration, resource evaluation, industrial mining.

Exploration licenses are issued for 3–4 years with possible extensions for resource evaluation; mining licenses last 20–30 years with rights for multiple renewals.

Significant differences exist regarding state participation and resource processing requirements:

- In Burkina Faso and Chad, local processing is mandatory (up to 50% in Burkina Faso).
- Burkina Faso, Niger, and Chad have expanded state participation in mining capital or profits after 2022.
- Mali and Mauritania allow 100% foreign ownership conditional on a national legal representative.
- Reclamation measures are mandatory; most countries require job creation for local populations.

Interest of the Sahel Countries in Non-Energy Uses of Nuclear Power

Priority areas: nuclear medicine, sanitation (Atoms4Food), isotope hydrology.

**However, IAEA programs in these areas are significantly underfunded,
prompting developing countries to seek international partners for development.**

Logistical Risks

- Sanction and political risks, technical shortcomings of transport infrastructure, and instability in neighboring countries create significant logistical risks for uranium mining and export in the Sahel.
- French Orano used the port of Cotonou for uranium transport from Niger, providing military escort for security; however, Benin closed borders for transport after 2023.
- Some Sahel countries (Mali, Niger, Burkina Faso) are landlocked and depend on neighboring countries, causing risks during border closures, such as those during ECOWAS sanctions against the Sahel Alliance of States.
- Russia is developing military and logistical agreements with key coastal countries, including Togo and São Tomé and Príncipe.

Expansion of Russia's Cooperation with Regional Countries

- Since 2022, Russia has significantly expanded contractual and institutional cooperation with Sahelian states including Mali, Niger, Chad, and Burkina Faso.
- The Russian Embassy in Niamey (Niger) resumed operations in December 2024, an important step in strengthening bilateral relations and Russia's diplomatic presence in the region.
- In 2025, official visits and consultations took place, including the first-ever meeting of the foreign ministers of Russia and the Sahel States Confederation, resulting in a signed strategic partnership on security and defense.
- Key documents were signed in military cooperation, mining industry, and atomic technology development areas, expanding Russia's engagement with resource-rich regions including uranium.
- In 2023, the Wagner Group was transformed into the "African Corps."
- Visit of Sergey Lavrov to Chad, June 2024.



Conclusions

- Despite economic and political difficulties, Sahel countries have a strong resource base and can become reliable partners for Russia in mineral extraction.
- Mutually beneficial cooperation depends on Sahel countries offering competitive resource prices and Russia supporting social and economic challenges in the region.
- The region's resources remain largely unexplored due to limited local exploration capacity and international investors' security concerns.
- Russia is well-positioned to overcome these challenges thanks to:
 - Good political relations with Sahel states
 - Developed contractual frameworks
 - Deep understanding of local dynamics
 - Willingness to seek comprehensive, mutually beneficial solutions

Conclusions

The traditional “resources in exchange for security” model needs modernization to ensure socio-economic benefits alongside economic gains.

- Unlike other international actors (France, the USA, China), Russia should emphasize creating microeconomies involving local communities around industrial mining sites.
- Russia should propose complex, protected industrial zones integrating:
 - Energy generation
 - Mining enterprises (uranium and other minerals)
 - Logistics and security systems
- The recent Sahel States Alliance might offer a framework for closer coordination between mining complexes spanning Burkina Faso, Mali, Niger, and possibly Chad.
- Effective project complexes require improved coordination among Russian mining companies.

Conclusions

- Uranium cooperation must be paired with enhanced nuclear material security efforts, including:
 - Ratification of international conventions on nuclear safety and anti-terrorism (International Convention for the Suppression of Acts of Nuclear Terrorism, Global Initiative to Combat Nuclear Terrorism)
 - Implementation of IAEA guidelines on disused radioactive sources
 - Expanded regulation and oversight in countries like CAR and Libya
 - Strict export licensing and registries for Category 1 radioactive sources
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- Projects must integrate development of:
 - Energy facilities
 - Transport hubs
 - Security facilities

Conclusions

- **Russia could coordinate joint projects with other external actors like China and Middle Eastern countries, combining mining and infrastructure development.**
- **Multilateral cooperation can reduce costs and increase project resilience by diversifying supply sources, technology, and political backing.**
- **Diplomatic and infrastructure support for alternative logistics routes through Sudan, Togo, Ghana, Senegal can reduce reliance on unstable or sanctioned export routes and mitigate political risks.**
- **Supporting regional trade and logistics cooperation facilitates cross-border development.**
- **Water resource development is essential, given acute shortages, and should be integrated into project planning with:**
 - **Underground water exploration**
 - **Well construction**
 - **Water purification and reuse technologies**
- **Ecologically rational water usage is critical to minimize ecosystem strain and local conflicts.**

Russia's USP in the Sahel

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- Russia can offer Sahel countries a comprehensive partnership model integrating energy, security, infrastructure, and social development into a unified sustainable growth strategy.
- Russia's centralized business management structure surpasses Western countries' decentralization, enabling high project coordination and uniting mining, energy, and infrastructure into territorial-industrial complexes. This model lowers costs, boosts resilience against external risks, and makes projects manageable through all stages-from exploration to processing and transport;
- Russia's key strength is blending economic and infrastructure development with security measures. Moscow can support building transport and military infrastructure, improving industrial facility security, controlling mines and supply routes, and reducing losses from conflicts and smuggling;
- Strengthening the Sahel States Alliance (SSA) remains vital. Russia can help the SSA enhance combat capability and institutional coherence, turning cooperation into systemic transboundary solutions-from counterterrorism to resource management. Russia can also link SSA countries with West African neighbors, including coastal states, stabilizing politically and sanction-restricted export routes;
- Russia can offer a significant social component. Each project should include local personnel involvement, job creation, professional training systems, and humanitarian support-from health to water supply-creating a social base, reducing poverty, and legitimizing projects among locals;
- As a nuclear energy leader, Russia can lay the foundation for future regional nuclear infrastructure development. Although large nuclear power plants are unlikely soon, small modular reactors, research centers, and non-energy nuclear technologies (water, medicine, food security) make Russian proposals uniquely adapted to Sahel realities.