

**Haranga**  
Resources

Haranga Resources Ltd (ASX:HAR)

# Investor Presentation

February 2024

[haranga.com](http://haranga.com)



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## **Competent Person Statement, Previously Reported Information & Cautionary Statement**

The information referenced in this presentation that relates to Exploration Results including the Mineral Resources at the Saraya Project has previously been released on the ASX. The Company confirms that it is not aware of any information or data that materially affects the information included in the market announcement, and that all material assumptions and technical parameters underpinning the announcement continue to apply. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements referred to in this presentation.

### **Mineral Resources**

The Company confirms it is not aware of any new information or data that materially affects the information included in the 25 September 2023 announcement *Significant maiden high grade uranium mineral resource*, Uranium Resource estimate and all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed when referring to its resource announcement made on 25 September 2023. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

### **Cautionary Statement LR 5.16.4**

There is a low level of geological confidence associated with the inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that production target itself will be realised.

# Investment in Nuclear Energy



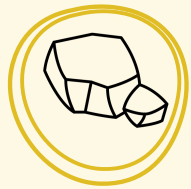
**Commodity performance:** Uranium prices continue to perform strongly in 2023, spot up >80%



**Historical data:** Prior exploration work, including more than 68,000m of drilling, radiometric and magnetic surveys, at Saraya indicates good uranium potential with data available and maiden MRE completed (16 Mlbs Inferred) demonstrating an established uranium resource and widespread uranium mineralisation



**Stable Government, Good infrastructure:** The Kedegou region already hosts numerous operating gold mines providing good infrastructure and access to mining services and skilled labour. Sealed roads and other supporting infrastructure is located within close proximity to target projects



**Gold potential:** In addition to good prospects for uranium, the geological structure at the Ibel South project also presents the prospect of gold and a range of other minerals



**Low cost:** In-country costs are low, relative to other jurisdictions, for exploration work



**Experienced team:** Board and management have significant mining industry experience ranging from exploration to production and including uranium in Africa and with ASX-listed companies



**Regional influence:** Strong in-country presence with good working relationships with local communities

# Company information



## Corporate structure

**\$0.225**

Shares price  
(As at 1 February 2024)

**89.5m**

Shares on issue

**\$20.14m**

Market capitalisation

**\$1.8m**

Cash on hand  
(As at 17 Jan 2024)

**38.5m**

Listed options  
(exercisable @ \$0.30,  
expiring 27 January 2025)

NOTE: 14.5m options are  
subject to escrow

**4m**

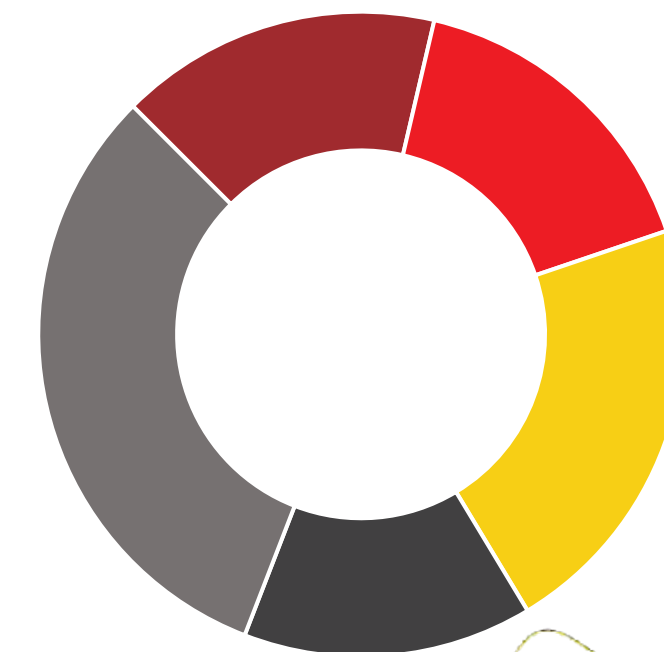
Unlisted broker options  
(exercisable @ \$0.18,  
expiring 4 October 2026)

## Share Price



## Top Shareholders

First Growth Fund Ltd	5.38%
Martin Pawlitschek	5.99%
Dusko Ljubojevic	5.99%
Jason Peterson	9.27%
Fotios Lekkas	10.88%





# Key Personnel



**Michael Davy**  
Non-Executive Chairman

Michael is an Australian Accountant with over 15 years' experience across a range of industries. Michael is currently a director and owner of numerous successful private businesses. During the past five years Michael has held directorships in several ASX listed companies and is currently the Non-Executive Chairman of Raiden Resources Limited (ASX: RDN), Non-Executive Director of Arcadia Minerals Limited (ASX: AM7) and a Non-Executive Director of Vanadium Resources Limited (ASX:VR8).



**Peter Batten**  
Managing Director

Mr Batten is a geologist with more than 30 years' experience in mineral exploration and development in Australia, Africa, Asia, Europe and North and South America including uranium, base metals, gold, iron ore and industrial minerals. He was Managing Director for Bannerman Resources Ltd, with uranium projects in Namibia and Botswana and Managing Director of White Canyon Uranium Ltd operating an underground uranium mine in Utah, USA. He was founding Managing Director of Berkeley Resources Ltd and also served as a Technical Director of Kalia Ltd.



**John Davis**  
Non-Executive Director

Mr Davis is a geologist with more than 30 years' experience in mineral exploration and development in Australia and Southern Africa, including gold, base metals and rare metals. He has extensive experience in the gold sector, from regional exploration and resource development to production, including as Exploration Manager/Chief Geologist for Metana Minerals NL. He was founding Managing Director of Jabiru Metals Ltd, playing a key role in the discovery of the Jaguar base metal deposit, and also served as a Technical Director of Monarch Gold Mining Co Ltd.



**Hendrik Schloemann**  
Non-Executive Director

Dr Schloemann is a geologist with a track record of more than 20 years of exploration around the world, with particular experience in Africa. His experience covers adapting to new social and technical environments and leading and motivating multi-cultural teams. He has experience with gold, uranium, pegmatite, diamond and gemstone exploration. Dr Schloemann is experienced in a broad range of corporate requirements for public companies including raising funds, marketing, corporate compliance, staffing and formulation of long-term strategy.



**Jean Kaisin**  
Chief Operating Officer

Mr Kaisin is a geologist, based in Senegal, with more than 23 years' experience operating in West Africa. He has been involved in mineral exploration from greenfield work through to completion of feasibility studies. He holds a Master of Sciences – Group of Geological and Mineralogical Sciences from the University of Louvain, Belgium. He has also completed the Oxford Executive Leadership Program at the Said Business School, Oxford University.



**Kyla Garic**  
Company Secretary

Ms Garic is a Director of Onyx Corporate Pty Ltd. Onyx provides Company Secretarial and CFO services to listed companies. Ms Garic's qualifications include a Bachelor of Commerce, Master of Accounting, Grad Dip Institute of Chartered Accountants Australia and New Zealand and Grad Dip in Applied Corporate Governance.

# Looming Uranium Supply Imbalance

- Sentiment changing to a fast-growing acceptance of the sectors ability to supply reliable baseload energy 24/7/365 with a clean, green footprint.
- Estimated nuclear power generation will range between its current 10% of the global electricity supply and may increase to 14% by 2040<sup>1</sup>.
- Between now and 2050 the world's power consumption is projected to grow by 50%<sup>1</sup>.
- Uranium supplies have been augmented since Fukushima (2011) by stockpile selloffs and from the secondary market, this had reduced to 18% of the supply (2022) and will further decrease to 10% by 2040<sup>2</sup>.
- The bottom was reached by 2018 and the spot price has recovered from US\$18/lb to US\$65/lb since.
- The WNA notes that consumption was 162.4Mlbs in 2021 and provides three scenarios by 2040:

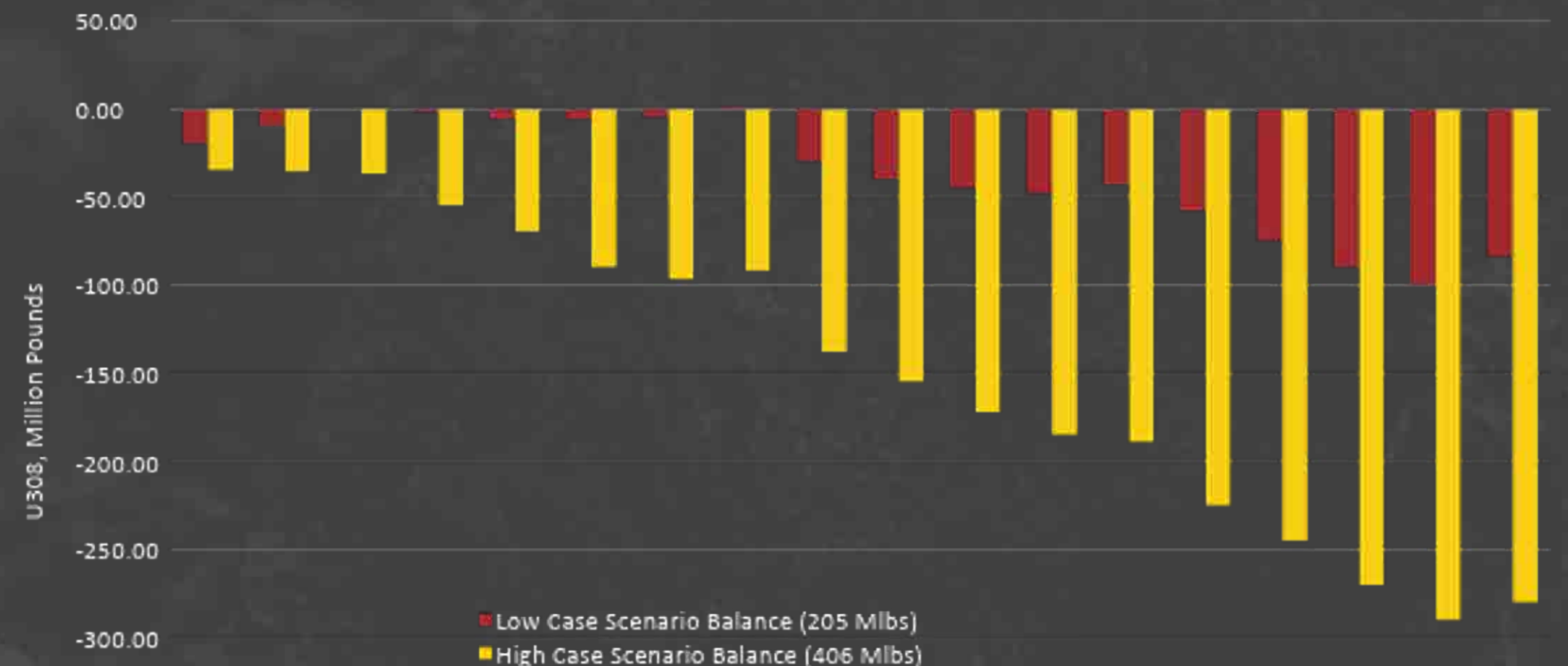
Low 205.4Mlbs pa

Base 291.9Mlbs

High 406.8Mlbs<sup>3</sup>

- New development operations are advancing but are expected to increase annual production by 30Mlbs pa less than the 41Mlbs lost following Fukushima.

Uranium Market Balance



Source

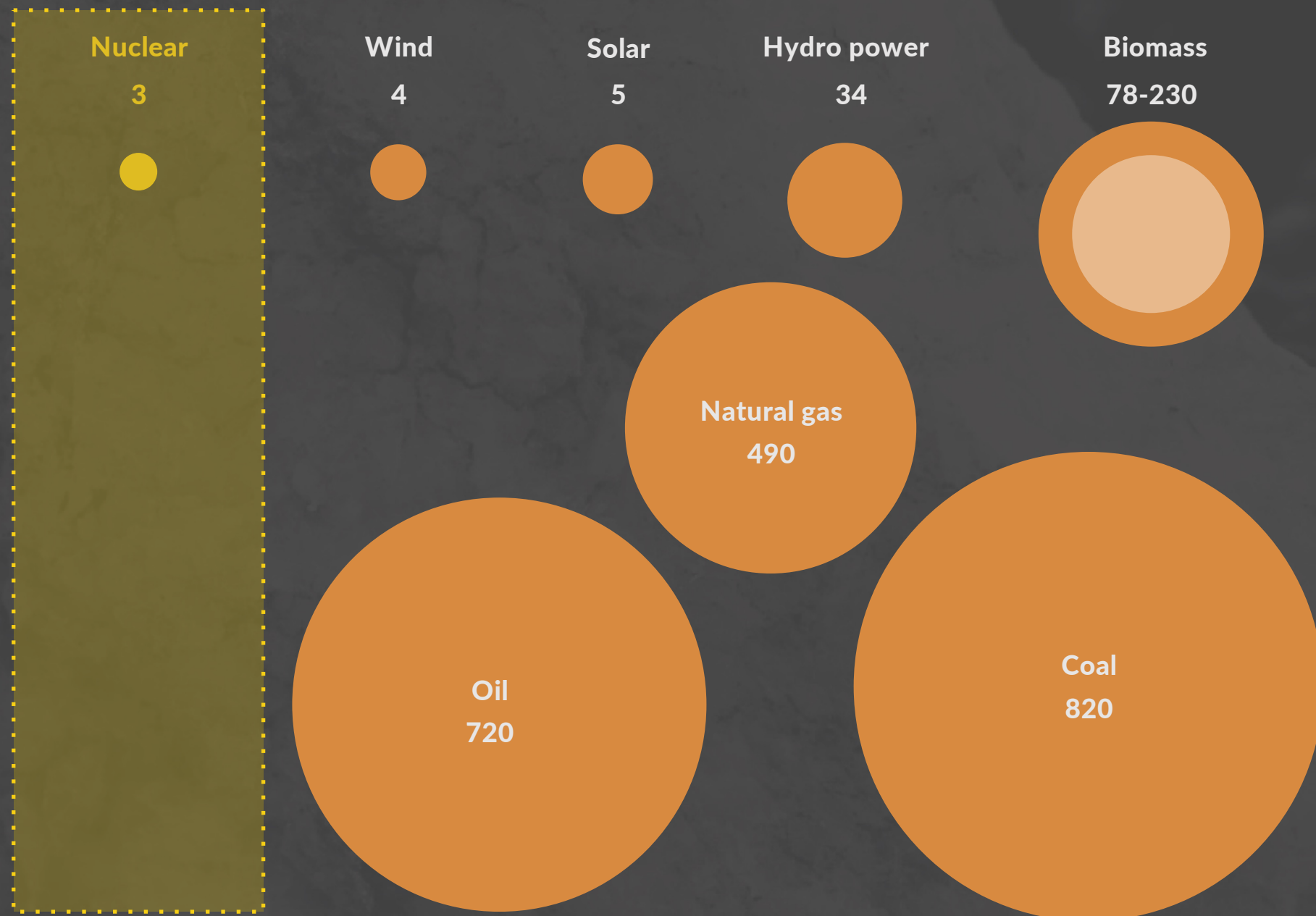
Source: WNA, IAEA, NEA, UxC, Company Doto, Morgon Stanley, Cantor Fitzgerald, Trade Tech, Independent Speculator estimates

1. International Atomic Energy Association
2. Nuclear Energy Association
3. World Nuclear Association

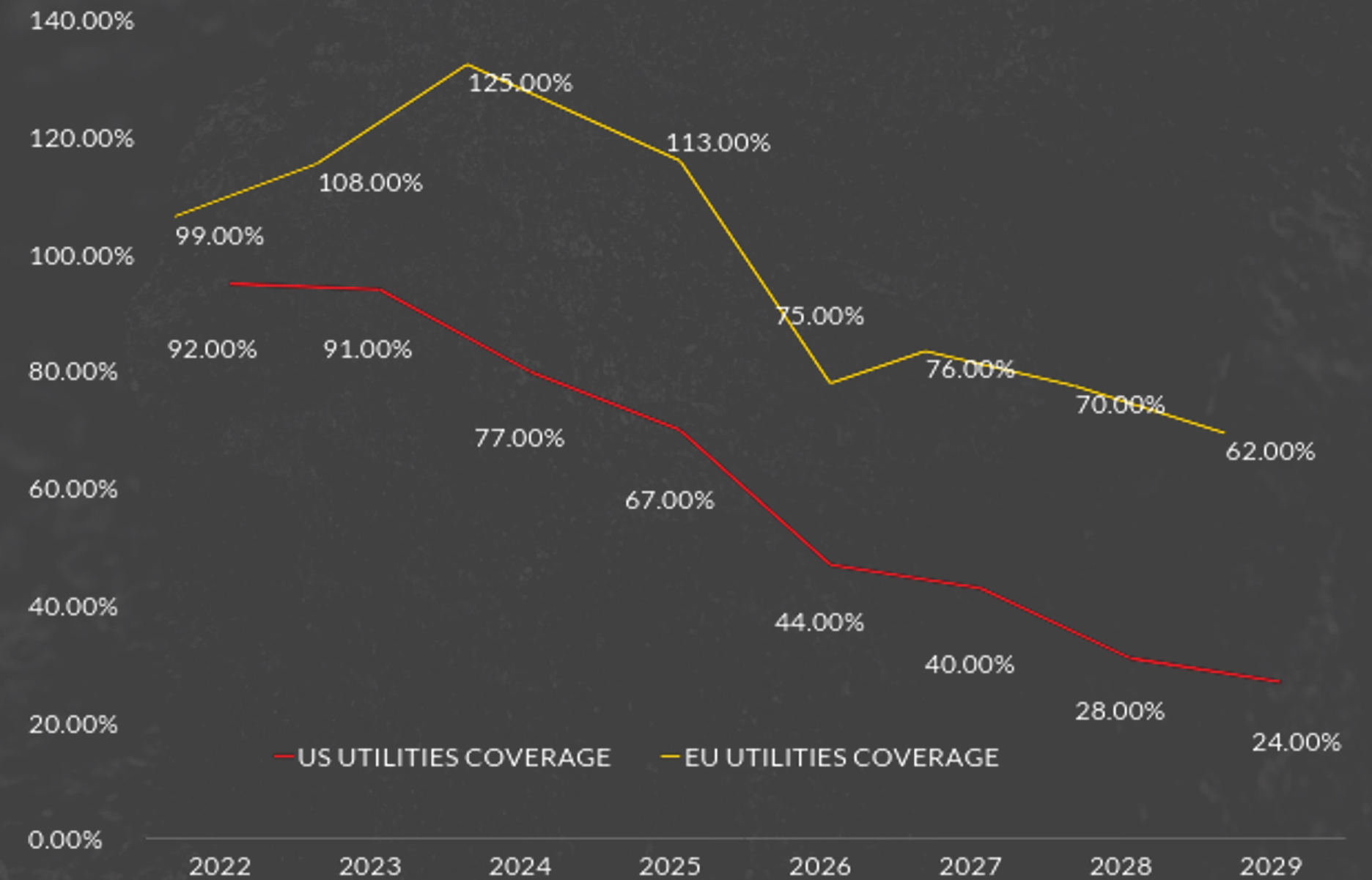


# Green Nuclear Demand Increase Needed to Cover Contract Shortfalls

Even compared to the two next lowest emission power sources of wind and solar, nuclear generates 25% and 40% less CO<sub>2</sub> equivalent emissions per unit of power<sup>1</sup>



Note: Range of emissions from biomass depend on material being combusted

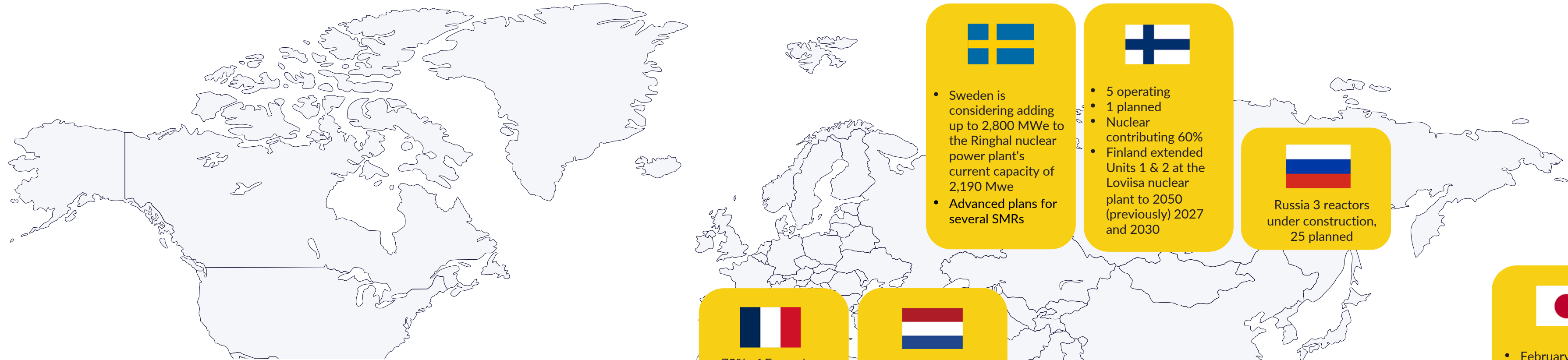


Future contracted coverage rates of US and European utilities<sup>2,3</sup>

Sources:


1. Our World in Data, "Safest Sources of Energy", 2020
2. US Energy Information Administration: Maximum anticipated uranium market requirements of owners and operators of U.S. civilian nuclear power reactors, 2021-2030, at end of 2021 {May 2022, Table 12}
3. Euratom Supply Agency Annual Report 2021 {2022}
4. Deutsche Welle. "Is a tripling of nuclear energy workable" 12 August 2023

# Investment in Nuclear Energy



Investment in nuclear power	Operable reactors	Reactors under construction	Planned Reactors	Proposed Reactors
World Nuclear Reactor Fleet	438	58	104	341
Chinese Reactor Fleet	55	21	47	156

Sources: Reuters, "Netherlands plans to build two nuclear power plants by 2035", December 2022; UxC Weekly, Vol 37, No 10; UxC Weekly, Vol 37, No 8; UxC Weekly, Vol 37, No 5 World Nuclear Association, World Nuclear Power Reactors & Uranium Requirements (February 2023)




- Sweden is considering adding up to 2,800 MWe to the Ringhals nuclear power plant's current capacity of 2,190 Mwe
- Advanced plans for several SMRs




- 5 operating
- 1 planned
- Nuclear contributing 60%
- Finland extended Units 1 & 2 at the Loviisa nuclear plant to 2050 (previously) 2027 and 2030



Russia 3 reactors under construction, 25 planned



- 70% of France's electricity is from nuclear energy
- March 2023, France announced funding for 6 EPR-2 PWRs across the country, a US\$50bn proposal to be presented by the end of 2023




- In 2021, Netherlands announced plans to build 2 nuclear reactors by 2035,
- 13% of the total electricity output
- US\$5.3bn in funding, and construction is expected to commence in 2028



UAE 3 operating reactors, 1 reactor under construction



India 8 reactors under construction, 12 planned



China 21 reactors under construction, 47 planned



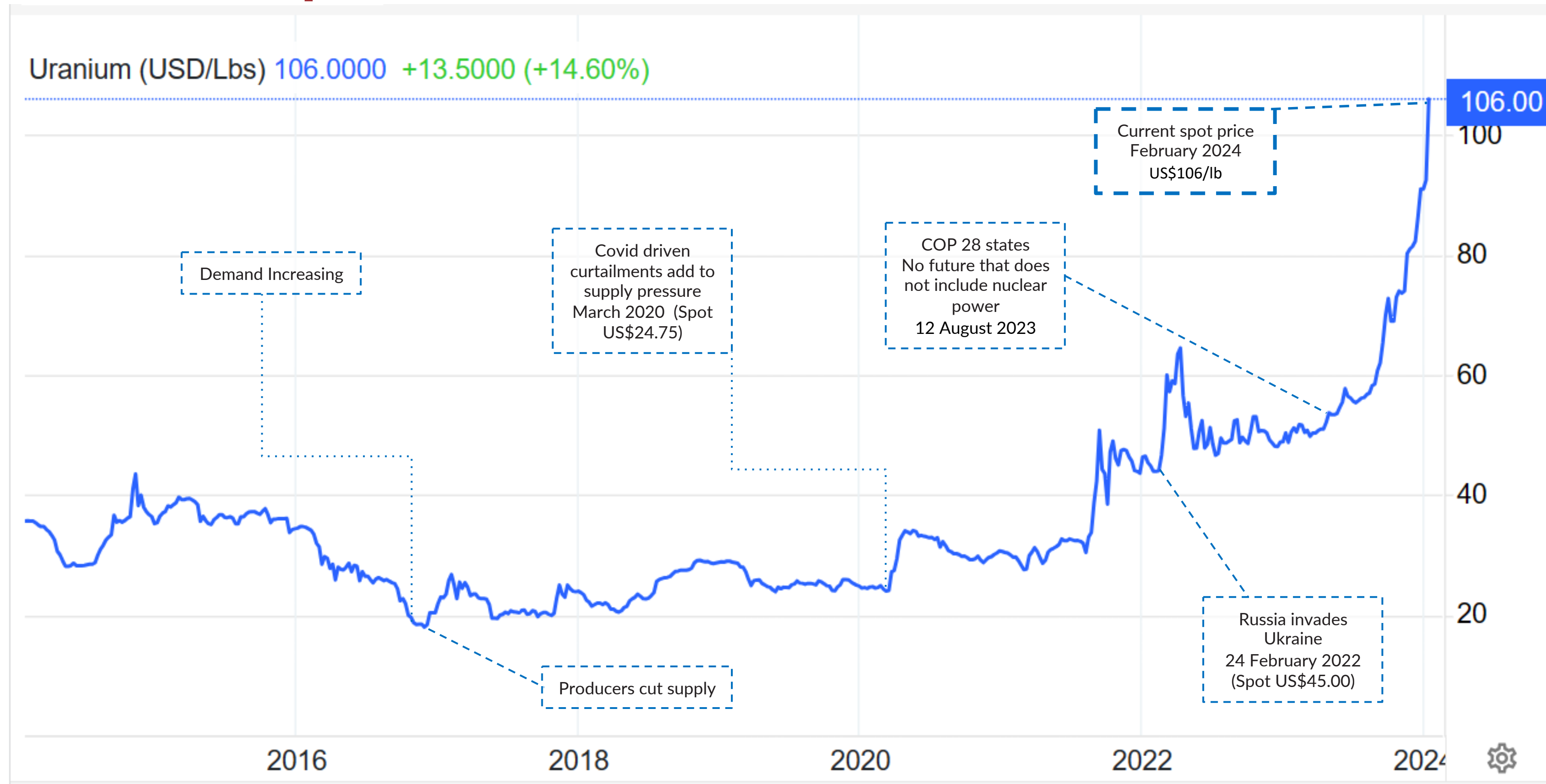
- February 2023, Japan approved nuclear reactors to operate beyond the current 60-year statutory limit
- Government aims to restart additional 7 reactors by this summer

“Twenty countries signed a pledge last weekend (6 August 2023) at the COP28 climate summit in **Dubai** to triple their nuclear energy capacity by 2050. The decision, by mostly European and North American countries, will mean that nuclear energy could go from meeting 10% of the world's current electricity needs to almost a third within 25 years.”<sup>1</sup> Deutsche Welle

Source: 1 Deutsche Welle. "Is a tripling of nuclear energy workable" 12 August 2023



# Uranium Spot Price - >80% Increase 2023



Source  
1) Trading Economics Uranium Data 2024



## Why Senegal?

# The safest investment country in West Africa

- Senegal independence from France in 1960, a stable democratic system with peaceful transitions of power through elections.
- Senegal has cemented a reputation as a stable and politically mature nation within the region.
- Senegal has made significant investments in its infrastructure development. The country has invested in expanding and modernizing its road systems, connecting major cities and regions to support economic growth and trade.

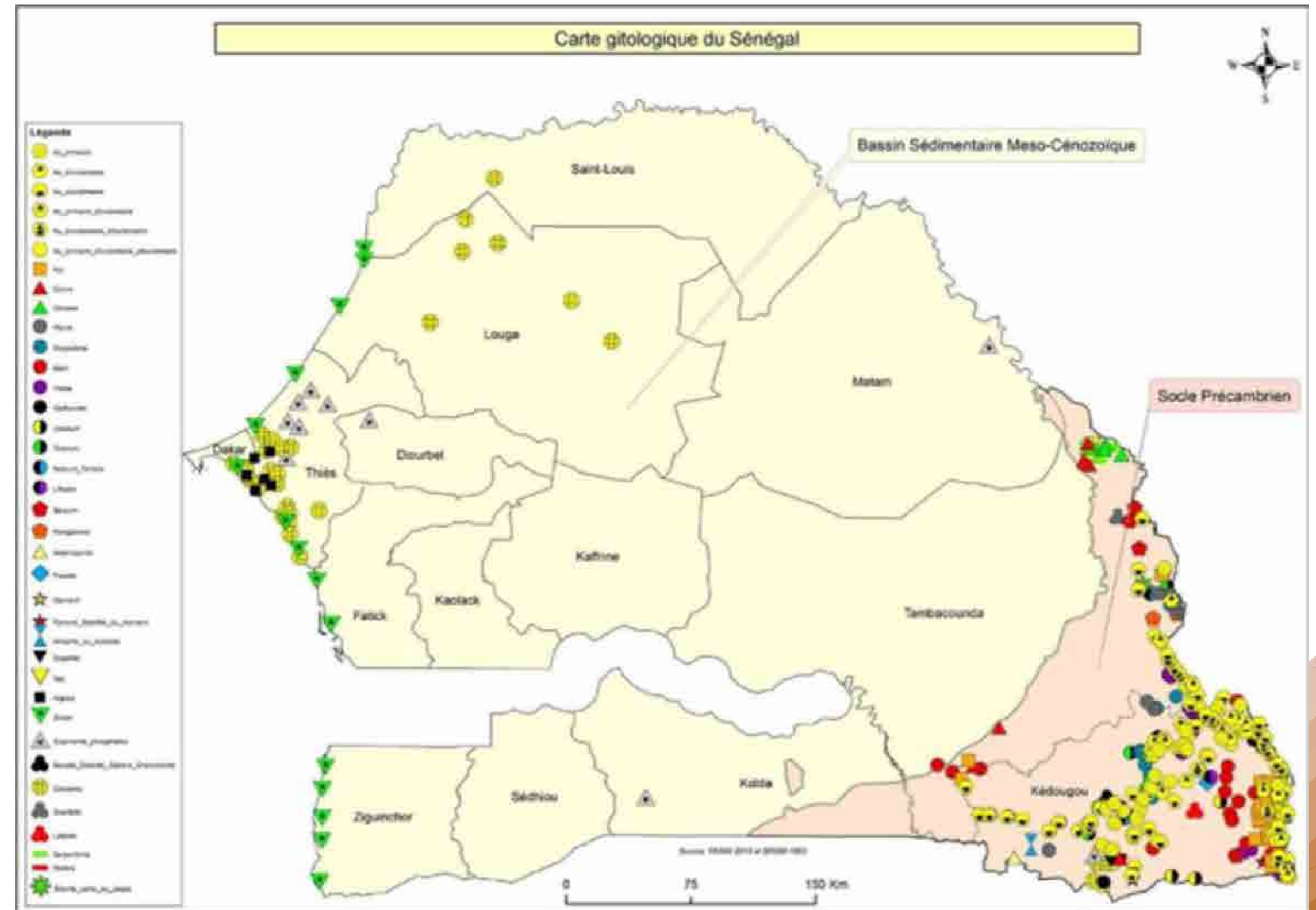






# Senegal – Stable Mining Jurisdiction

- ✓ New Mining Code - 8 November 2016 and its Implementing Decree 2017-459 dated 20 March 2017.
- ✓ The Mining Ministry of Senegal is immensely positive of the mineral potential of the country.
- ✓ Early traces of mining includes Iron metallurgy along the Senegal river (10th century BCE) and artisanal gold mining in Eastern Senegal
- ✓ Specific development for Phosphate and for Iron, Gold, Copper, Tin in Eastern Senegal.
- ✓ 2010 saw the European Development Fund support large scale geochemical surveys and geophysical surveys.
- ✓ Recent exploration activities have been driven by major gold discoveries in neighboring Mali. This has led to significant gold discoveries with Sabodala, Massawa (Endeavour), Mako (Resolute), Diamba Sud (Chesser) and Boto (Managem).



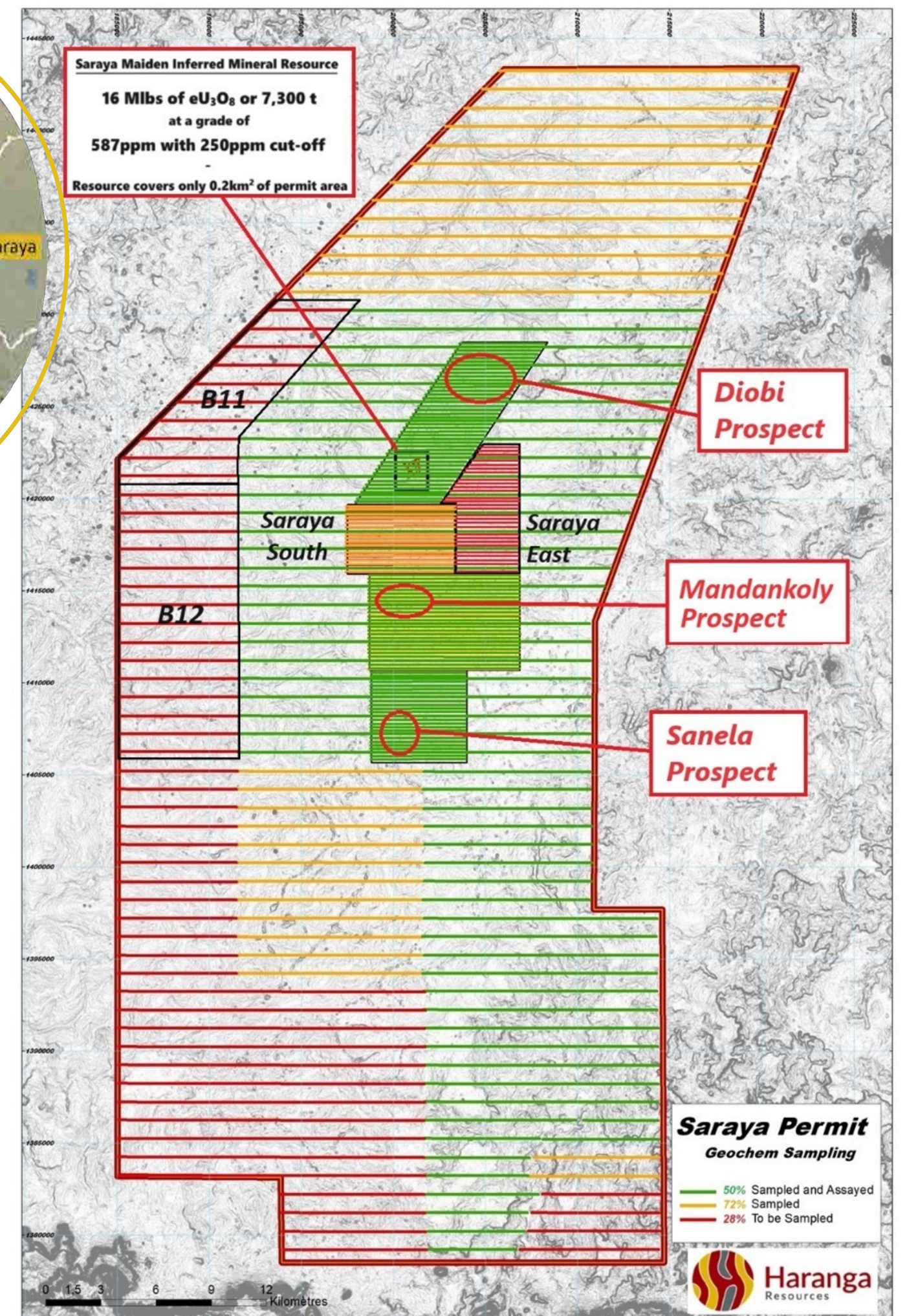




# Saraya Uranium Project

Senegal

- The Saraya Uranium Project is a JV between Haranga Resources Ltd (70%) and Mandinga Resources SARL (30%, free carried to PFS) and relates to permit PR02208 in East Senegal.
- Ground partially explored by Areva and Cogema prior to 2010.
- Uranium mineralisation occurs in structural corridors within an episyenite, mineralisation is modelled on a Na metasomatic model<sup>1</sup>.
- The surface geology at Saraya is masked by 2 to 7m of lateritic hardcap making it difficult to trace mineralisation from soil sampling, requiring drill penetration.
- 68,000m of historic drilling completed in permit area, 65,000m in the Saraya deposit, all data contained in Summary reports.
- Drilling at Saraya extends past 200m vertical depth but the majority is above 160m, the known mineralisation is limited by drilling only, with possible extensions along strike and down dip.



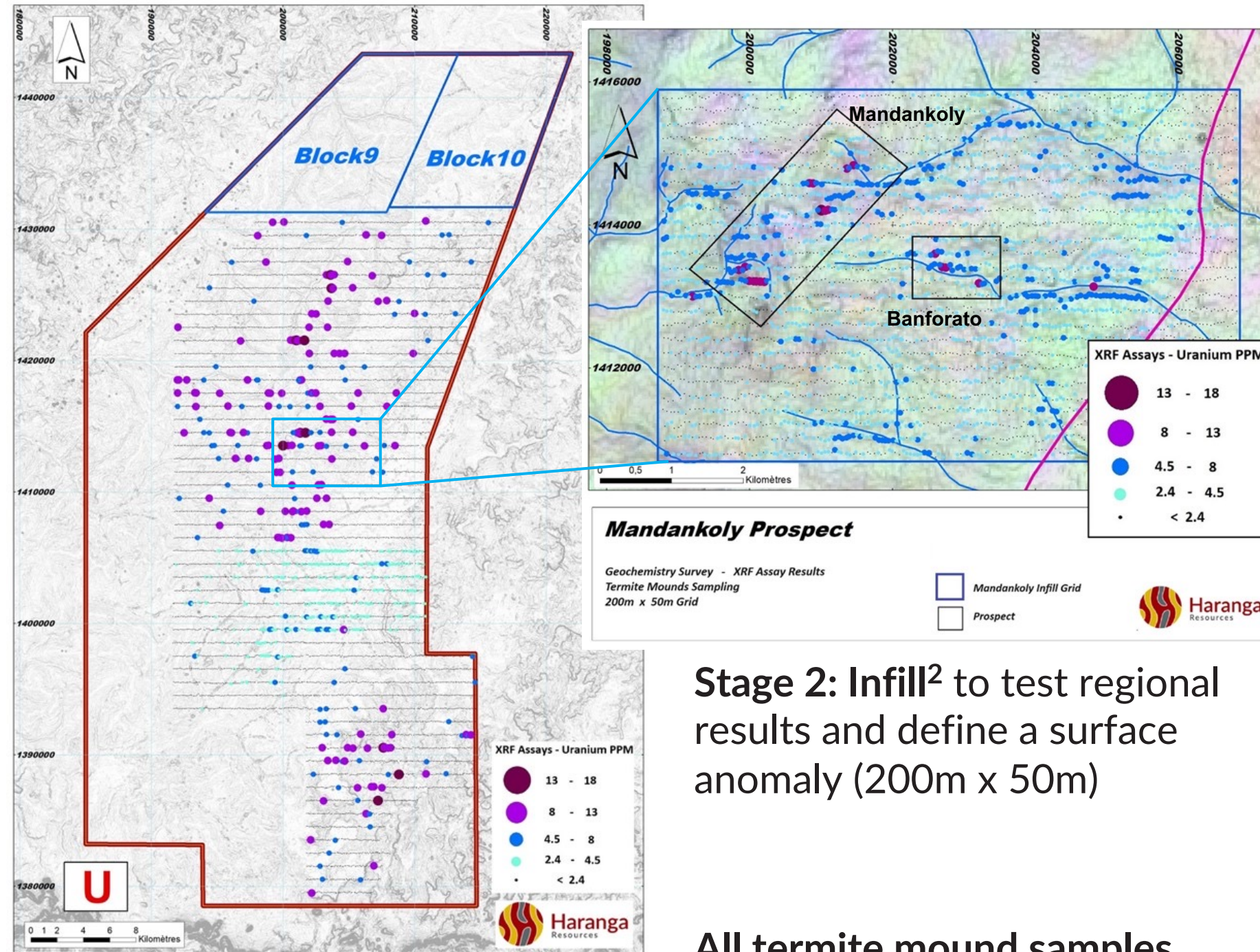
1 Refer to ASX Announcement 25 Sept 2023 Significant Maiden High Grade Uranium Mineral Resource

2 Refer to ASX Announcement 22 Jan 2024 Haranga Discovers Multiple New Uranium Anomalies at Mandankoly Prospect



# Saraya Uranium Project – 4 Stage Exploration

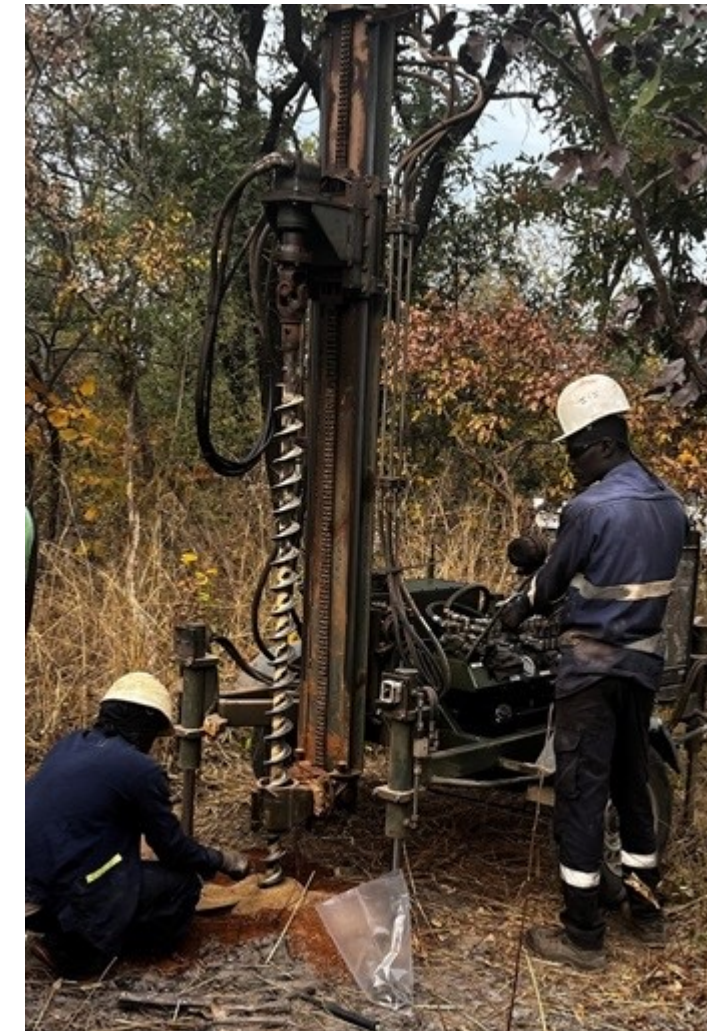
Senegal



**Stage 1:** to locate areas within our 1650km<sup>2</sup> permit we utilize termite mound sampling (tms).  
**Regional<sup>1</sup>** to highlight potential locations (1000m x 100m)

**Stage 2: Infill<sup>2</sup>** to test regional results and define a surface anomaly (200m x 50m)

All termite mound samples and auger samples are processed on site and analysis is completed using Haranga's recently acquired XRF Vanta-M from Olympus



**Stage 3:** Infill termite mound anomalies are then subjected to **Auger drilling<sup>3</sup>**.  
This will, hopefully, locate the source of the tms anomalism and to provide indications on the orientation of any underlying anomaly in preparation for drilling.



**Stage 4: RC/DD drilling<sup>3</sup>** – any tms anomaly that is successfully tested by auger then constitutes a drill target. Initial drilling will be RC and follow up may include diamond core

RC/DD drilling samples are processed on site and, initially, tested with XRF Vanta-M from Olympus and samples responding positively are then sent for laboratory analysis

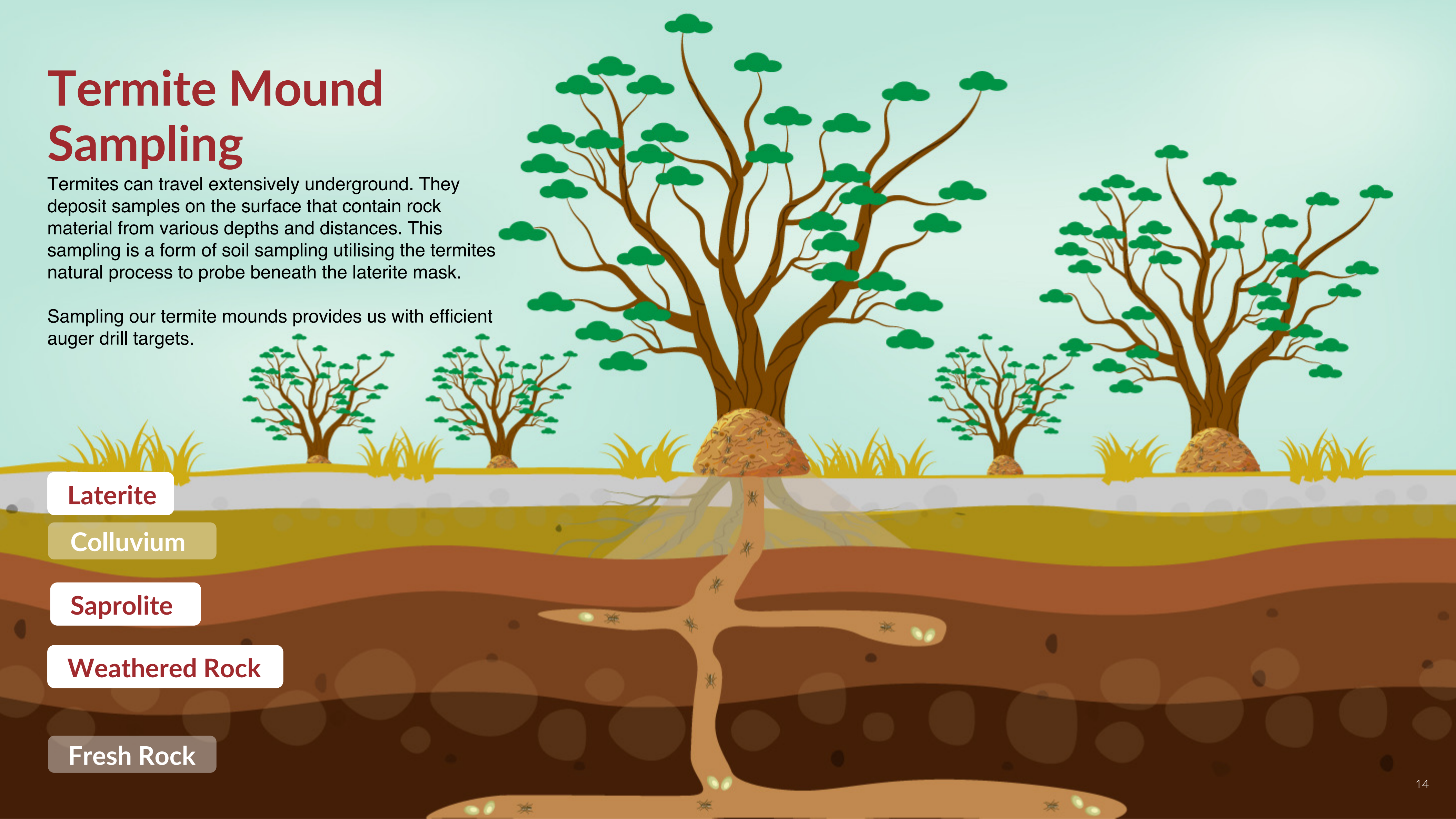
1 Refer to ASX Announcement 31 Jan 2024 Saraya South Prospect Adds Uranium Anomalies to Haranga's Growing Portfolio  
2 Refer to ASX Announcement 22 Jan 2024 Haranga Discovers Multiple New Uranium Anomalies at Mandankoly Prospect  
3 Refer to ASX Announcement 30 Jan 2024 HAR Quarterly – 31 Dec 2023



# Termite Mound Sampling

Termites can travel extensively underground. They deposit samples on the surface that contain rock material from various depths and distances. This sampling is a form of soil sampling utilising the termites natural process to probe beneath the laterite mask.

Sampling our termite mounds provides us with efficient auger drill targets.



Laterite

Colluvium

Saprolite

Weathered Rock

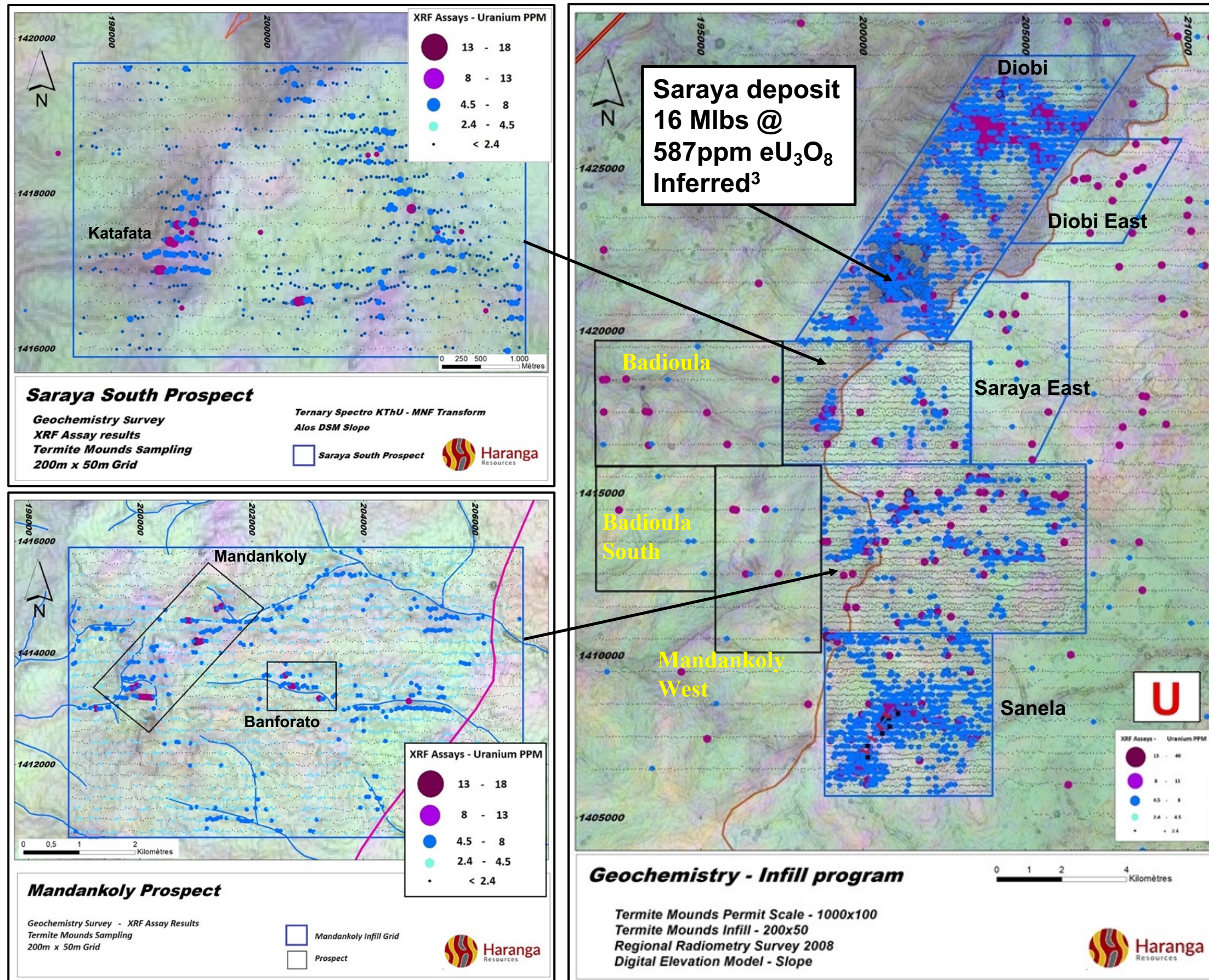
Fresh Rock





# Saraya Uranium Project – other prospects

Senegal



- Outside of Saraya there were several known anomalous areas that have had some attention. Mainly surface sampling but some (Diobi, Mandankoly and Sanela) with historic drilling.
- Diobi, Mandankoly and Sanela are the most advanced and orientation work is ongoing at Diobi and Mandankoly in preparation for potential drilling.
- Originally there were 7 known prospects including Saraya this has grown to 10 prospects
- The six known anomalies outside Saraya have or will be subjected to infill termite sampling programs to better define the anomalism identified at these sites
- Diobi (Saraya NNE), Sanela, Mandankoly and Saraya South infill termite mound sampling is complete
- Three new locations<sup>1</sup>, requiring infill sampling have been identified from the regional sampling, to date
- Between 20% and 30% of the permit still needs to be covered by regional termite mound sampling programs
- There are still five identified locations requiring infill termite mound sampling programs<sup>2</sup>

<sup>1</sup> Refer to ASX Announcement 31 Jan 2024 Saraya South Prospect Adds Uranium Anomalies to Haranga's Growing Portfolio

<sup>2</sup> Refer to ASX Announcement 22 Jan 2024 Haranga Discovers Multiple New Uranium Anomalies at Mandankoly Prospect

<sup>3</sup> Refer to ASX Announcement 25 Sept 2023 Significant Maiden High Grade Uranium Mineral Resource

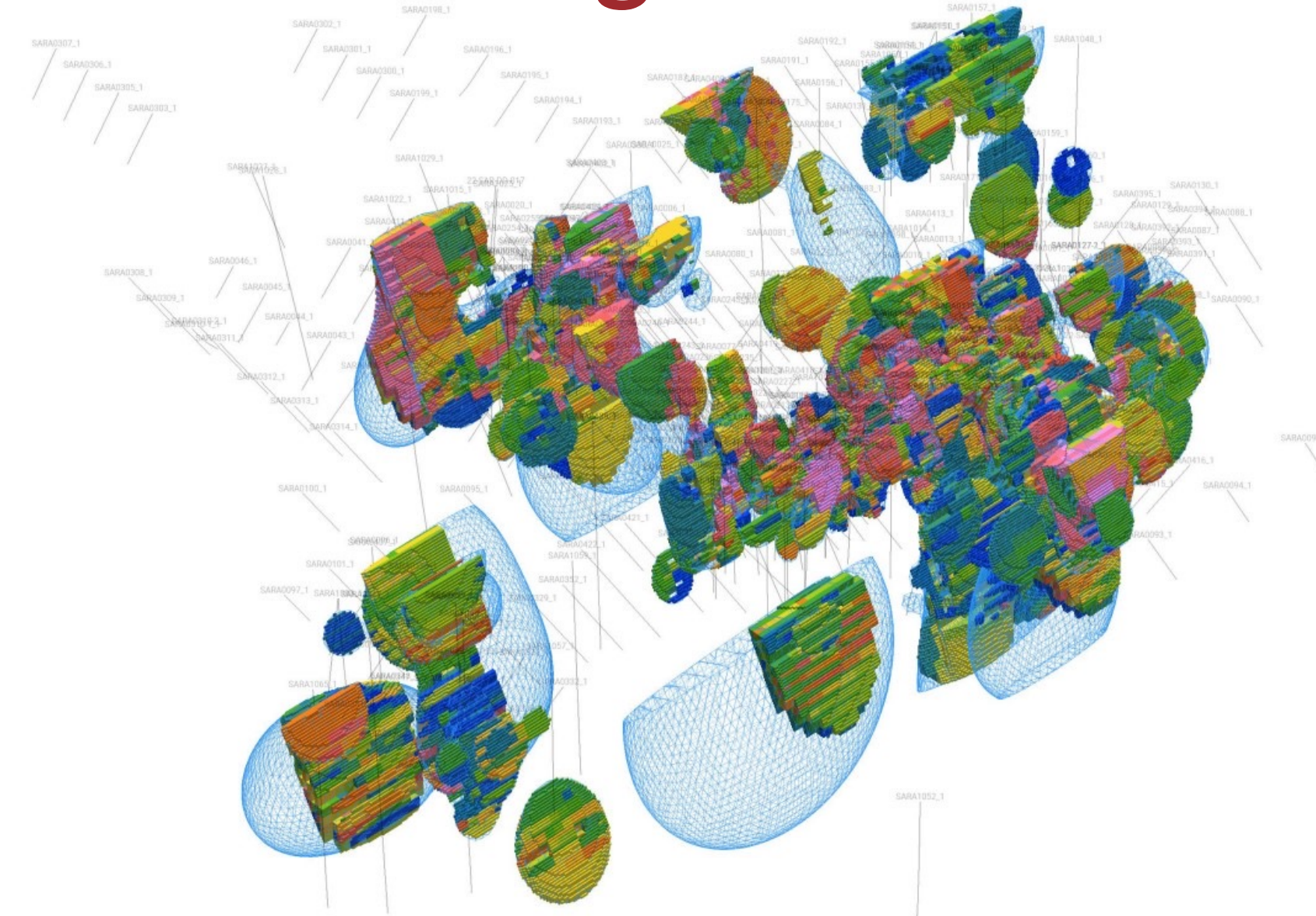




# Saraya Uranium Project – Existing Resource Big Potential

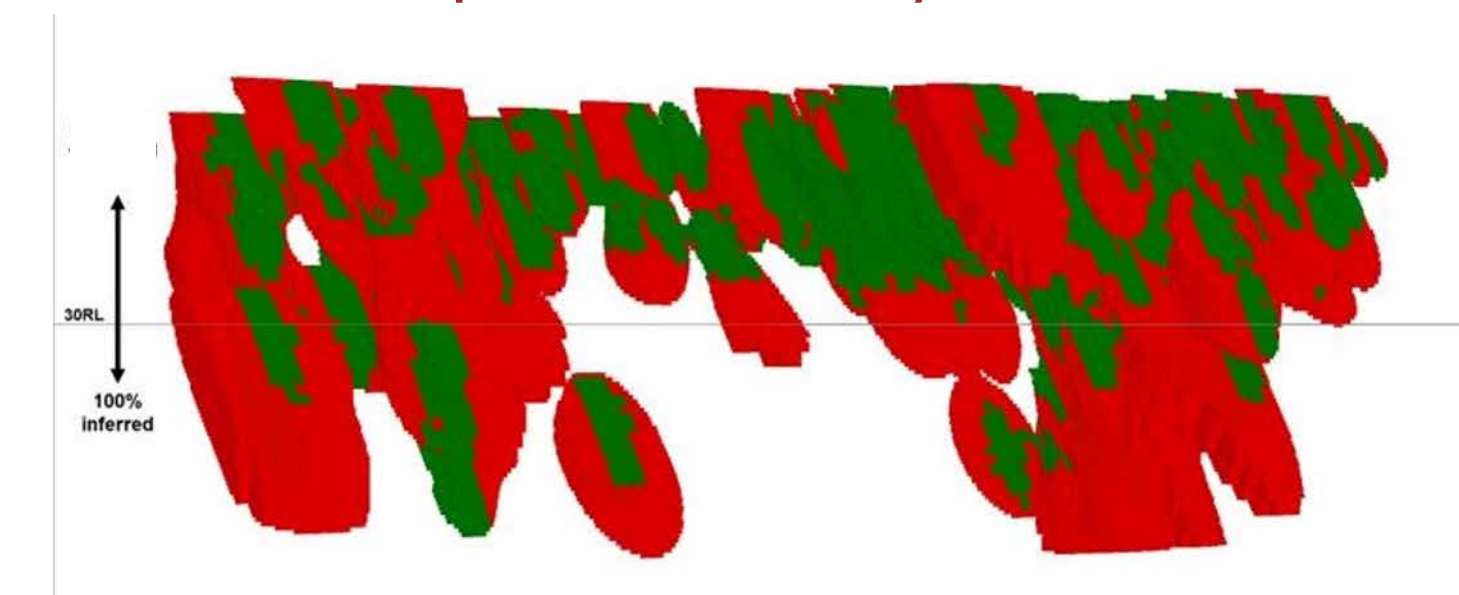
Senegal

- Haranga verified the historic data with the completion of 22 diamond core holes for 3,021m, resulting in 45 uranium intercepts for 524m of mineralisation with a weighted average grade of 775ppm eU<sub>3</sub>O<sub>8</sub><sup>1</sup>.
- MRE is based upon 541 drillholes combining historic exploration programs with more recent (2022) drilling undertaken by Haranga Resources.
- Characterised as 100% Inferred (JORC 2012) but could be upgraded with successful metallurgical testwork.
- The model is data bound and possible extensions exist along strike, downdip and down plunge. 30RL is approximately 160m below the surface at Saraya.



3D Oblique view of the Saraya Ore Block model.

Zone	Classification	Tonnage	Grade	Contained eU <sub>3</sub> O <sub>8</sub>	
		Mt	eU3O8 ppm	Mlb	tonnes
+30RL	Inferred	9.40	641	13.29	6,000
-30RL	Inferred	3.05	419	2.82	1,300
<b>Total</b>	<b>Inferred</b>	<b>12.45</b>	<b>587</b>	<b>16.11</b>	<b>7,300</b>



Est: Combined Estimator copy  
 ■ eU3O8 in Global Model 1000 (sp 65: K), eU3O8 indicated  
 ■ eU3O8 in Global Model 1000 (sp 65: K), eU3O8 inferred

Grade calculated using a 250ppm bottom cut and 10,000ppm top cut Indicator kriging

1 Refer to ASX Announcement 28 Feb 2023 Drill Results Confirm Wide, Shallow, High Grade Uranium

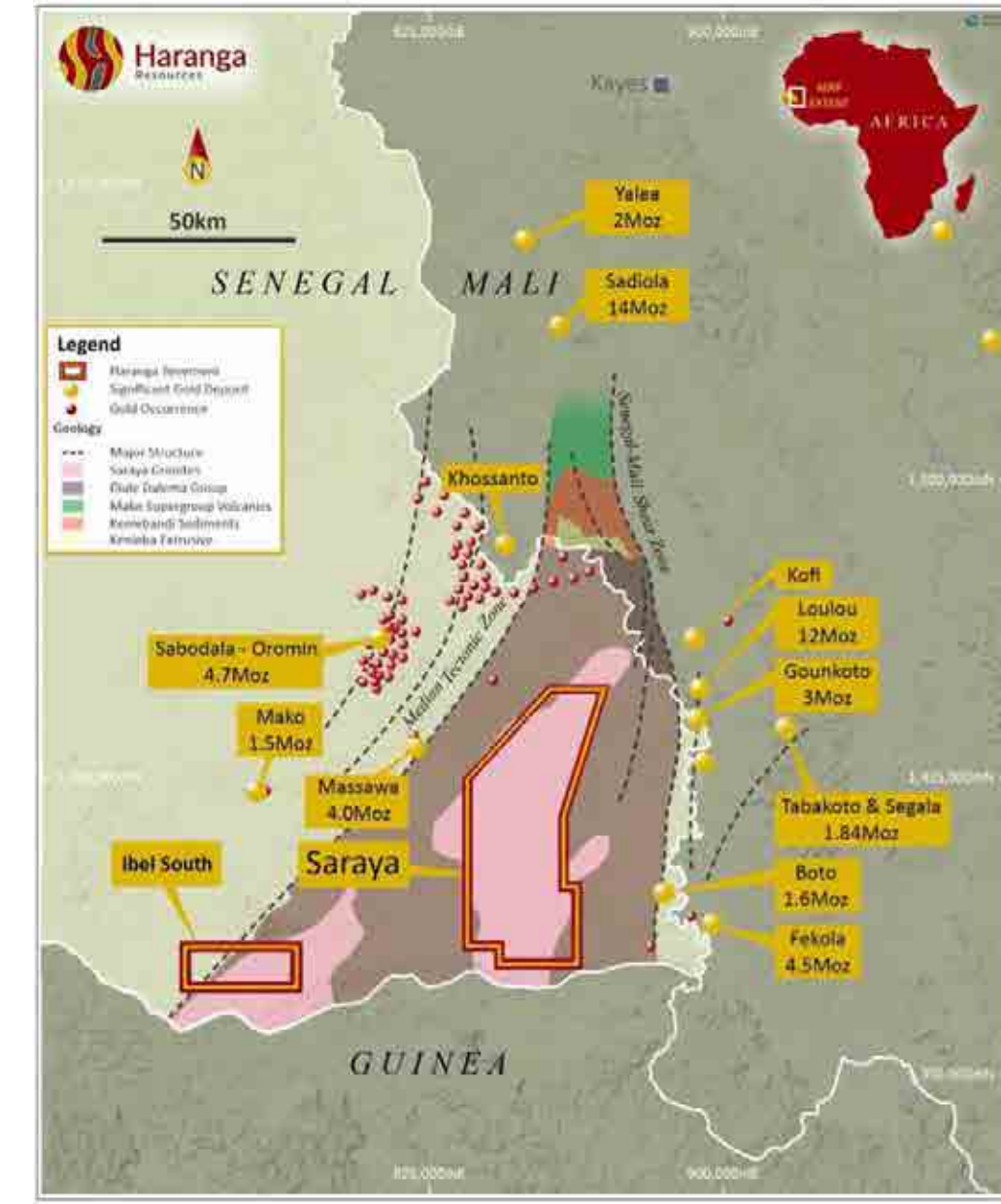
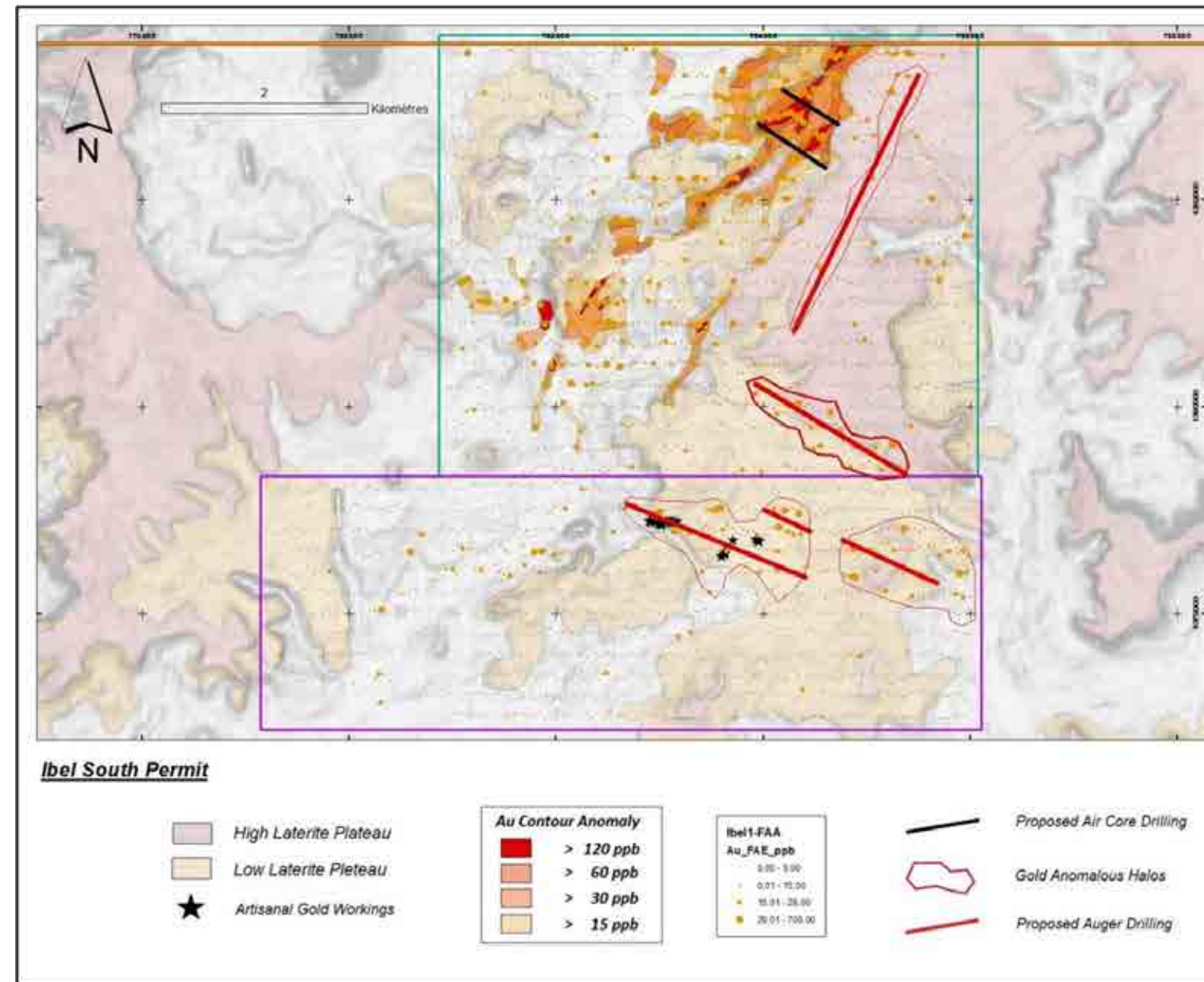
2 Refer to ASX Announcement 25 Sept 2023 Significant Maiden High Grade Uranium Mineral Resource



# Ibel South Gold Project

## Senegal

- Birimian Volcanics of the Kenieba inlier, which has reported in excess of 40 million ounces of gold in resources being mined or under development<sup>1</sup>
- Approximately 80 km SW of the 8.72 Moz Teranga Gold Corporation (TSX: TGZ), Sabodala-Massawa gold mine (in production)<sup>2</sup> and 30km south of the 1.5 Moz Resolute Mining (ASX: RSG) Mako gold mine (in production)<sup>3</sup>.
- Ibel South contains known gold anomalies from historical gold exploration, up to 180 ppb Au in recent termite mound sampling, yielding a 2.5 km long anomaly containing up to 643 ppb gold and providing immediate drill targets<sup>4</sup>.
- Ibel South can be serviced from the Company's existing exploration camp and sample preparation facilities.
- Active artisanal surface workings on site



<sup>1</sup> Refer to Haranga Resources Prospectus, dated 29th October 2021, Independent Geological Report Haranga Gold and Uranium Projects, West Africa, page 64, released on the ASX 25 January 2022.

<sup>2</sup> Refer to Endeavour Mining, Technical Reports, Teranga Gold Corporation-Sabodala-Massawa Gold Project PFS NI43-101 Technical Report 21 August 2020 (<https://www.endeavourmining.com/our-business/sabodala-massawa-mine>)

<sup>3</sup> Refer to Toro Gold Ltd Annual Report 2018.

<sup>4</sup> Refer to ASX Announcement 3 July 2023 Geochemical Survey Yields Walk-Up Drill Targets at IBEL SOUTH Gold Permit

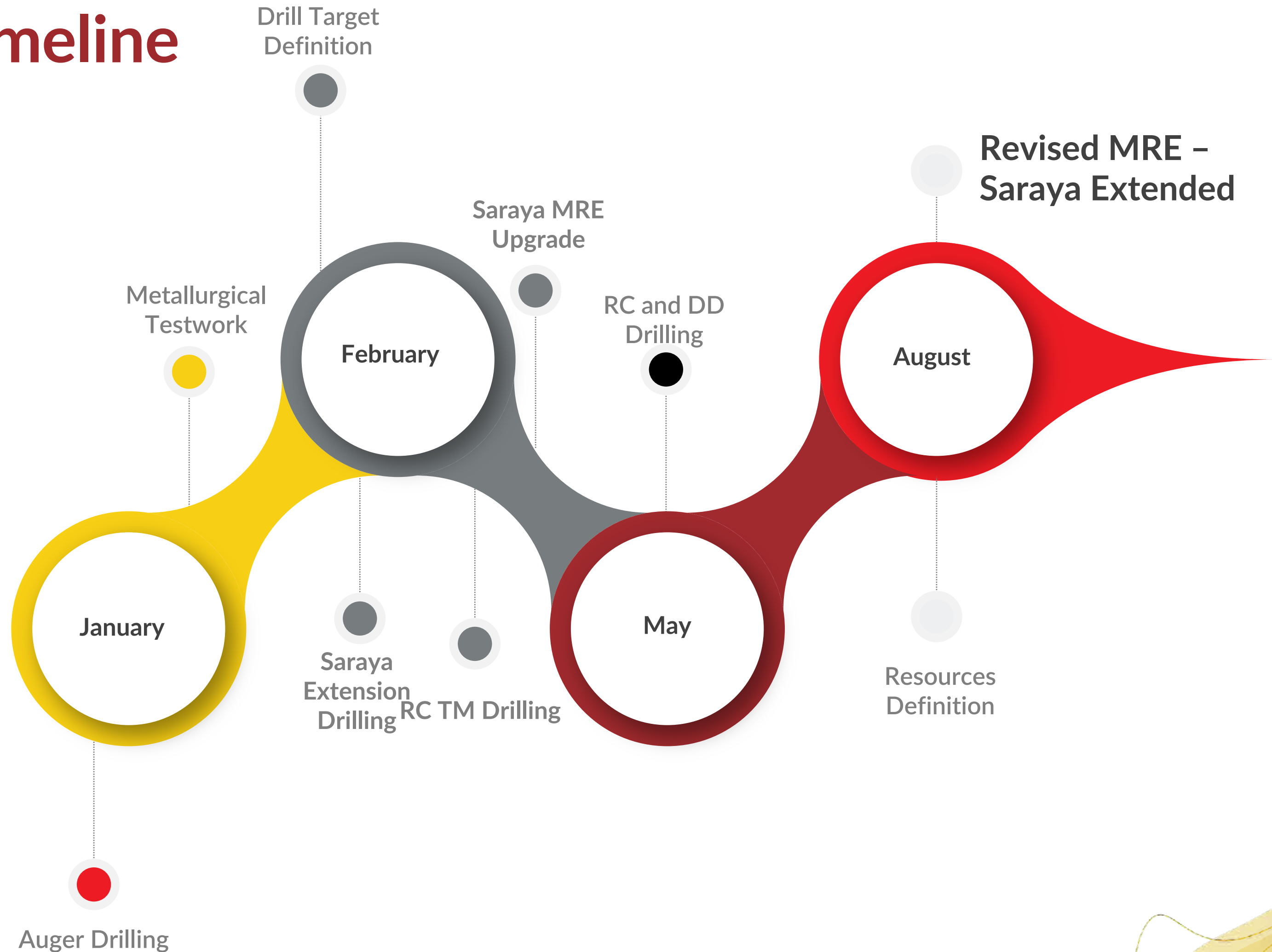
<sup>5</sup> Refer to ASX Announcement 14 November 2023 Exploration Update Major Auger Drill Program Commences



# Project Timeline

## Saraya Project

Saraya Maiden  
MRE October 2023





# Summary



## Country

- Senegal is a stable geopolitical location with a pro mining government and recently (2016/17) updated Mining laws
- Presidential elections due in February 2024



## Uranium Assets

- Haranga Resources - maiden Mineral Resource Estimate of 16Mlbs Inferred @ 587 ppm eU<sub>3</sub>O<sub>8</sub> for the Saraya Deposit
- Saraya is the first of several radiometric and geochemical anomalies to be explored in Haranga's Senegal project
- Nine anomalies identified and ready for auger definition and RC drilling in Q1 2024



## Demand

- Global uranium demand is increasing as seen in the +80% increase in spot price in 2023 and utilities returning to long term contracts
- The world is embracing nuclear power for its clean, carbon free electricity generating capabilities with true baseload component and 24/7/365 reliability – COP28
- The West is becoming increasingly conscious of energy supply chain vulnerability inherent in outsourcing power generation



## Team

- Haranga's Senegal based team are able to move quickly on any opportunity that presents itself within Africa and specifically in West Africa



## Gold

- Ibel South prospect – anomalous gold results in fertile gold territory, drill ready





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Resources

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