



Extractives Hub
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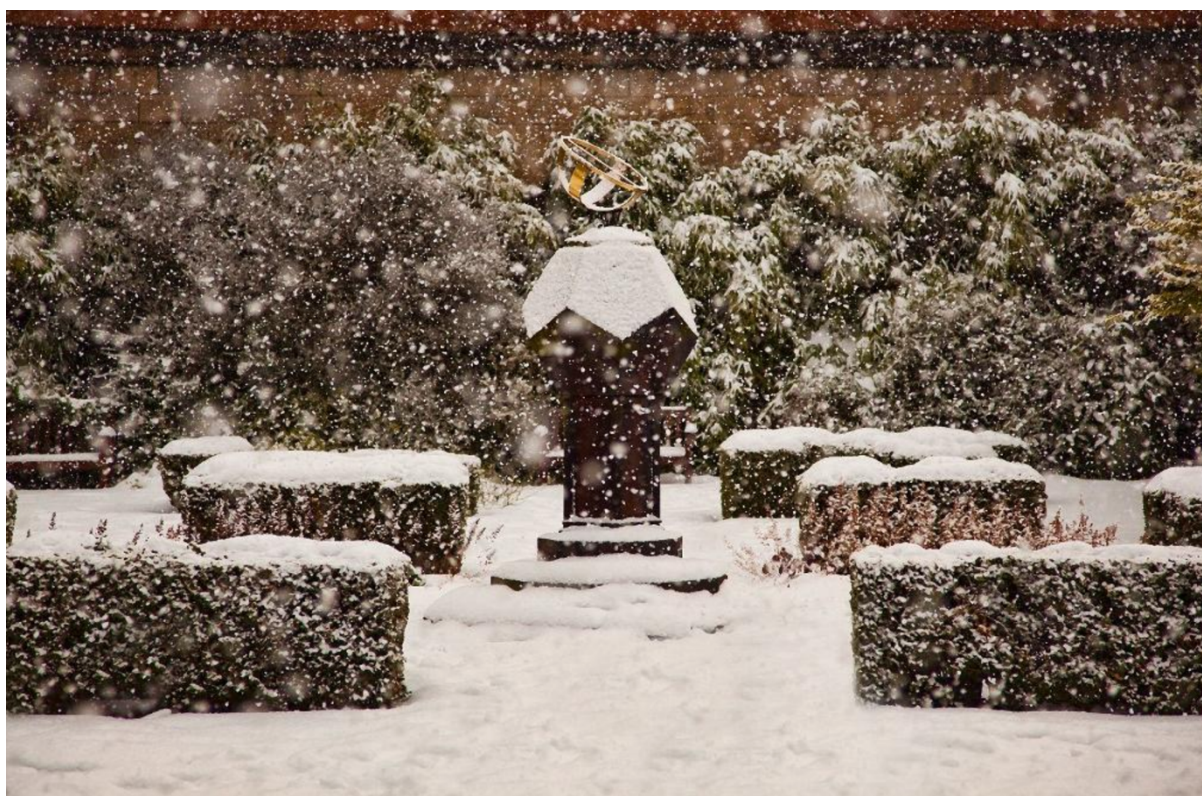


Centre for Energy, Petroleum
and Mineral Law and Policy
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Diverging paths from a shared history? Leveraging Mining for Development: lessons from Rwanda and Burundi

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(i) Abstract

This Insight analyses how different economic policies, peace, leadership and laws can lead to starkly different minerals-sector driven developmental outcomes even in countries that are very similar. For the case studies selected for this Insight, there are observed similar characteristics with respect to: geomorphology; geology; culture; population groupings; colonial and post-colonial history; and the recent and/or current existence of violent conflict. The experiences of two neighbouring east African countries, Burundi and Rwanda, were analysed and contrasted, as informed through a detailed review of available evidence. *The results indicate that Rwanda has significantly increased the income, production and development outcomes derived from its mining sector compared to Burundi.* Suggested causes for this divergence are identified and discussed below, notably: the importance of peace/stability; the protection of property rights; the absence of an authoritarian State; the developmental policies of the State with respect to mining-led economic growth (*dirigisme*); and the role and importance of the private sector and competition.

Key words: Burundi, Rwanda, mining, war, political security, policy, regulation and laws.

1. Introduction

Burundi and Rwanda are two neighbouring east African countries whose history and culture overlap in very important ways, notably having:

- a rich natural resources endowment of minerals;
- linguistic similarity, to the extent of the respective national languages being identified as, in fact, dialects of the same overall language¹, with English the most commonly spoken foreign language spoken in both countries, followed by French;
- similar systems of civil law in place;
- existed under both authoritarian rule and, at other times, as democracies;
- a common colonial, and a very similar pre-colonial, history – see below; and
- experienced since independence (1962) periods of extreme interethnic conflict (including leading to genocide), and numerous *coup d'états* – five in Burundi and three in Rwanda.

The focus of this Insight is contextually on the two countries of Burundi and Rwanda, and thematically with respect to the following Extractives Hub topics:

- Economic Linkages in the Extractives Sector;
- Conflict and Extractives; and
- Human Rights and Extractives.

It is highly contingent whether a nation's natural resources endowment results in benefits to its citizens. Interethnic and other forms of conflict are likely to undermine economic development linked to natural resource extraction (or, indeed, linked to other sectors). Conflict may result in human rights abuses, e.g. war crimes and internal acts of terror and/or genocide.

During periods of intense and sustained conflict, a nation's economy is likely to shrink/ economic development is reversed, e.g. as is the observed case in Syria since the protests against, repression by, and conflict against President Bashar Al-Assad in petroleum-rich Syria since 2011. In contrast, countries not experiencing conflict have the chance to grow their economies, including through extractives-led socially-inclusive economic development.

Human rights abuses may occur in authoritarian regimes where there is little practical constraint on government repression; once more, the Syrian case of 2011 is illustrative since such abuses were perpetrated by the government against peaceful protestors early in 2011, pre-dating Syria's longstanding civil war that started later in that year and is ongoing.

Burundi and Rwanda have experienced similar periods of authoritarian rule, both colonial and domestic, conflict, genocide, and also periods of democracy and economic development –

¹ André Coupez, *Abrégé de grammaire rwanda*, vol 1 (Institut national de recherche scientifique 1980); Willy Smedts. 'Morphology: an international handbook on inflection and word-formation/Booij, Geert (Berlin 2000)' (2002) 91(3) *Leuvense Bijdragen/Leuven Contributions to Linguistics and Philology* 486

these periods characterised by more statist periods of government which, whilst democratic, have placed a central role on the (in both cases) unitary State in leading the nation's economic life.

As a simple taxonomy, government may be considered to be democratic or authoritarian; and economic development outwith authoritarian rule can occur through State leadership of the economy (*dirigisme* or *dirigiste* development) or through a free market/ *laissez-faire* approach to developing the economy. Since authoritarianism implies unrestrained State control, in economic development terms it represents an extreme and undemocratic form of *dirigisme*.

Laissez-faire economic development is not a pronounced feature of either nation since independence, instead both Burundi and Rwanda have experienced period of economic *dirigisme* and political authoritarianism. In particular the high-growth *dirigiste* economic development is a feature of the longstanding Rwandan president (2000 – to date), Paul Kagame. However, and as noted below, there are elements of *laissez-faire* economic development to be found in the Rwandan case, alongside the more dominant theme of mining for development led *dirigisme*.

In contrast, and since Independence, Burundi has not benefited from any equivalent period of uninterrupted, relatively calm, economic development, under whatever form of government or economic development model. Instead the post-Independence history of Burundi is replete with instances of interethnic conflicts and killings; State and anti-State violence; and authoritarian government. The only calm period that saw economic development and GDP growing like no other regime is under president Jean Baptist Bagaza.

The startling result is that Burundi's economy is now shrinking whilst Rwanda's is flourishing.

What are the exact reasons and dynamics for and of this? What useful lessons in extractives-led economic development, directly and indirectly via linkages, can be drawn in the context of conflict and post-conflict nations afflicted with pasts and (in the case of Burundi) present day conditions of human rights abuses?

By contrasting the experiences of Rwanda and Burundi, with respect to economic development, conflict, governance and politics, this Insight seeks to explore and draw useful lessons for other resource-rich, present and post-conflict, countries.

Since Burundian and Rwandan conflict and genocide are rooted in their respective histories, the best place to start this analysis is by due consideration of the impact of the previous 135 years on these two countries present lived experiences of economic linkages and related extractives-led economic development, in the context of (post) conflict economic renewal.

1.1 Historical Context & Impact on the Present Day

The modern countries of Rwanda and Burundi have been shaped by the same history from the partition of Africa at the Berlin Conference (1884-1885) when European powers allocated Burundi and Rwanda to Prussian Empire (Germany).² The kingdoms of Urundi (the territorial basis for modern day Burundi) and Ruanda (as above, for Rwanda) were subsequently incorporated into Germany East Africa in 1890. A German military presence established in the modern-day capital of Burundi, Bujumbura (then called Usumbura), in 1896. Three years later the combined Urundi-Ruanda administrative district of German East Africa was formed from these former kingdoms.³

To cement its rule, Germany implemented a “divide and rule” approach regarding the Urundi-Ruanda’s intermingled major ethnic groups, the Tutsi, the Hutu and the Twa. Estimates from the late nineteenth to the late twentieth centuries suggest a demographic split of approximately: 14% Tutsi; 85% Hutu; and 1% Twa.⁴

Antecedent to German rule, and despite being outnumbered by more than six to one by their Hutu neighbours, the Tutsi were the established dominant group across what was to become Urundi-Ruanda, ruling through own monarchies and power structures. The Germans placed themselves at the new apex of an extended hierarchy that retained Tutsi pre-eminence over the Hutu and the Twa. The resulting *de facto* Prussian/ Tutsi alliance was grounded in shared material interest.

This same approach was pursued even more vigorously by Belgian colonialists in the period of their rule between 1916 and 1962, when the renamed Burundi and Rwanda gained their independence as two separate and independent countries.⁵

Rwanda ethnic violence through what was known as social revolution ignited ethnic tensions in Burundi from 1959 despite the facts that the two countries gained independence from Belgium on 1st of July 1962. Rwanda was established as a republic in 25 September 1961, but still under Belgian colonial rule; in 1962, the newly independent republic was led by President Grégoire Kayibanda.

In contrast, Burundi remained a kingdom until 1966, in which year Michel Micombero overthrew King Mwambutsa and proclaimed Burundi a republic.

Post-Independence, the political and social divisions initiated through colonisation exploded into interethnic violence and genocide, experience in recurrent waves of killings in both countries between at least 1963 and 1994. For example, approximately:

² Kristina A. Bentley and Roger Southall, *An African Peace Process: Mandela, South Africa and Burundi*, vol 25 (HSRC Press Cape Town 2005)

³ Id., Institute for Security Studies 2005 "Burundi: Political System and history"

⁴ Peter Uvin. 'Ethnicity and power in Burundi and Rwanda: Different paths to mass violence' (1999) Comparative politics 253

⁵ Tony Sullivan, A History of Rwanda and Burundi, 1894-1990, < <https://libcom.org/history/articles/rwanda-burundi-history> >, Accessed on 19th November 2019

- 20,000 people from the Tutsi minority were killed in 1963 in Rwanda;
- 120,000 Hutu were killed in 1972 in Burundi;
- 150,000 Hutus and Tutsi killed in the period 1986-1992, across both countries;
- 350,000 Tutsi killed in Burundi in October 1993; and
- 1,000,000 Tutsi, Twa and moderate Hutus killed in Rwanda during 1994.

Whereas both countries have experienced attempts at unifying the Hutu and Tutsi populations as part of one peaceful and prosperous polity, longstanding success has only been achieved thus far in Rwanda, notably under the ongoing presidency of Paul Kagame.

For example, in June 1993 President Melchior Ndadaye won Burundi's first post-Independence democratic election, becoming the first Hutu head of State of the country and seeking national reconciliation; however he was assassinated in October of that year by Tutsi soldiers, an act that led onwards to acts of genocide of Tutsi populations in Burundi in October 1993⁶ and then later in April 1994 Tutsi genocide at an even larger scale in neighbouring Rwanda followed.

But whereas Rwanda was eventually to experience relative interethnic peace subsequent to those two years of terrible killings, in Burundi the interethnic killings, political conflict – e.g. President Pierre Buyoya gaining power in a 1996 *coup d'état* - has continued, resulting in clear economic and political divergence of these countries since the genocide of 1994 in Rwanda and acts of genocides in Burundi.⁷

It is that post-conflict/genocide divergence that is the focus of this insight, specifically in relation to the contrasting levels of achievement in each country with regards to extractives-led, in particular mining, economic development.

1.2 The Urundi-Ruanda Mining Sector under Belgian Rule

1.2.1 Introduction

Burundi and Rwanda share more than just history. In the context of their mineral resources and the development of their mining sectors, it is important to note that they also share geomorphology and belong to the same sedimentology evolution.

Geologically, Rwanda and Burundi are known to belong to the Kibaran belt that stretches from Burundi, Rwanda, western Tanzania and south-western Uganda. This belt contains

⁶ International Commission of Inquiry for Burundi: Final Report under Resolution 1012: <<https://www.usip.org/sites/default/files/file/resources/collections/commissions/Burundi-Report.pdf>>, Accessed on 18th November 2019

⁷ Id.

economically viable deposits of tins, beryllium, tungsten, niobium-tantalum, gold and lithium.⁸ The geological deposits were known to the Belgians who started mining activities in early 1930s introducing their first mining company (MINETAÏN: *Société des Mines D’Etain du Ruanda-Urundi*, Muhinga-Kigali Mining Company (SOMUKI: *Société Minière de Muhinga-Kigali* in 1934, a company that opened its door in Urundi in 1936 to carry out prospectus mining work at the rare earth site of Gakara in Urundi. Subsequent mining companies were introduced in Ruanda-Urundi in both 1945 (GEORWANDA) and in 1948 (COREM). During the same period in 1948 SOMUKI started mining rare earth minerals at Gakara site from 1948; other rare earth resources were identified at Karonge ten years later.⁹

The mining sector Ruanda-Urundi remained at an embryonic stage compared to that of the neighbouring Belgian colony of the Congo, in particular south-eastern region of Katanga. Miners from Ruanda-Urundi were often employed in the Congo rather than close to home, constituting at least 5 percent of the work force there, a work-force recruited and authorised by the then *Haute-Commissaire* of Ruanda-Urundi Alfred Marzorati in 1928.¹⁰

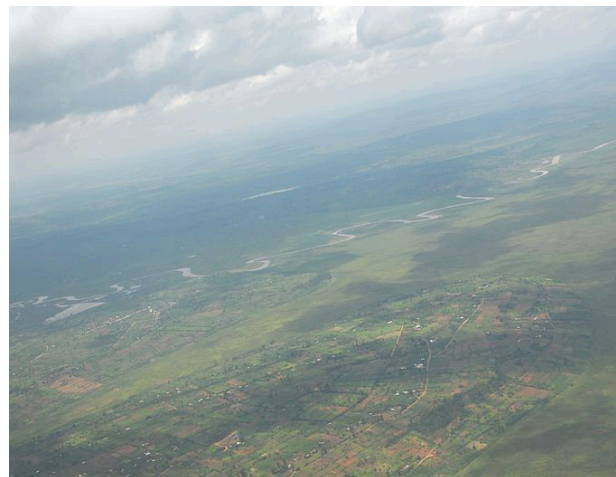
Overwhelmingly the picture is of Congo outstripping its smaller neighbour of Ruanda-Urundi with regards to minerals sector development, drawing in its labour and outstripping it in output.

2. Mining Development: Rwanda & Burundi post-1962 Independence

2.1 Burundi



Part of Astronaut’s image of Bujumbura, 2010, included under Creative Commons license - NASA



Part of “Leaving Rwanda for Burundi” image, included under Creative Commons license – Dave Proffer

The following table provides the duration of political regimes post-Independence:

⁸ L. Van Wambeke. 'The Karonge rare earth deposits, Republic of Burundi: New mineralogical-geochemical data and origin of the mineralization' (1977) 12(3) Miner Deposita 373

⁹ J. Thoreau. 'Le massif alcalin de la Haute-Ruvubu (Urundi)' (1932) 43 Bull.cl.Sci.Acad.R.Belg. 877

¹⁰ René Brion, *De la mine à mars* (Lannoo Uitgeverij 2006), 134

No	President	Took office	Left Office	Time in Office	Notes	Prime Minister
1	Michel Micombero	28/11/1966	1/11/1976	9 years, 339 days	Deposed	Nyamoya
2	Jean Baptist Bagaza	1/11/1976	3/09/1987	10 years, 306 days	Deposed and 31/08/1984 election	Nzambimana
3	Pierre Buyoya	3/09/1987	10/07/1993	5 years, 310 days	Lost election	Sibomana
4	Melchior Ndadaye	10/07/1993	21/10/1993	103 days	Assassinated	Kinigi
5	François Ngeze	21/10/1993	27/10/1993	6 days	Coup	
6	Sylvie Kinigi	27/10/1993	5/02/1994	101 days	Constitutional	
7	Cyprien Ntaryamira	05/02/1994	06/04/1994	60 days	Compromise Airplane crash	Kinigi Kanyenkiko
8	Sylvestre Ntibantunganya	06/04/1994	25/07/1996	2 years, 110 days	Constitutional Deposed	Kanyenkiko Nduwayo
7	Pierre Buyoya	25/07/1996	30/04/2003	6 years, 279 days	Coup, then transitional compromise	Ndimira Pascal
8	Domitien Ndayizeye	30/04/2003	26/08/2005	2 years, 118 days	End of transition period	Position removed
9	Pierre Nkurunziza	26/08/2005	incumbent	13 years, 289 days/time of writing	Indirect election 2005 Direct 2010 and 2015	Position removed

2.1.1 Late 20th Century Minerals Sector Development

Numerous authors and the present president Pierre Nkurunziza credit President Jean Baptist Bagaza (1976 – 87) with successfully initiating extensive Burundian economic development.¹¹ Although president Bagaza's regime was primarily concerned with agriculture, infrastructure and energy, it is under his leadership that extractives industries development activities started at scale. For instance, in 1984 upstream petroleum international oil company (IOC) AMOCO signing a convention for a six-year offshore petroleum exploration programme on Lake Tanganyika, and the government planned for both the construction of a petroleum refinery, and an international pipeline to port (to and in Tanzania). Large scale nickel mining also started under Bagaza's presidency.

After president Bagaza had initiated the mineral sector exploration, the sector then started to develop more extensively in the early 1990s under president Buyoya (1987 – 1993) and for a short period thereafter. However, the sector suffered badly along with the economy during the murderous and conflict-ridden years of the mid-1990s. For instance, the presence of

¹¹ Iwacu Journal, Bagaza, l'ingénierie économique et juridique au service de son pays: Interview of 18 May 2016 <<https://www.youtube.com/watch?v=i7g3Bc8IHMg>>, <https://umr-developpement-societes.univ-paris1.fr/fileadmin/GrandsLacs/Burundi_2015/Iwacu_Magazine_31.pdf>, Jean-Pierre Chrétien. 'Histoire du temps présent en Afrique: Burundi, août 1988' (1989b) 22(1) Vingtième siècle. Revue d'histoire 156

minerals in Burundi started to attract many companies including Canadian corporation, AMTEC and the state owned BUMINCO. However, the security situation deteriorated in 1995 and 1996 deterred foreign companies from being productive.

Like in Rwanda, see below, strong efforts were made to revitalise the mining sector at the start of the current century, e.g. in 2002 the *Compagnie Minière d'Exploitation du Burundi* was relaunched to exploit tungsten and gold reserves of in Muyinga province, and phosphate reserves in Matongo. The below section provides a current prognosis with respect to those efforts, efforts that are continuing in the context of ongoing violent conflict within the country, including political violence.

2.1.2 Prognosis - Burundi

There are many challenges facing the Burundian mining sector, including:

- Absence of foreign investment, including cancelled foreign investment, due in part to a high estimation of above ground risk in the country, e.g., the security deterioration in 1995 and 1996 deterred foreign companies from being productive. For example Andover Resources a subsidiary Canadian company Argosy Mineral that was planning to exploit nickel, construct a 35 MW powerplant and a rail or road access to the plant, and obtained concessions for another deposit in Nyabikere. However, they were unable to proceed with the project due to political instability and a reported lack of respect of property ownership and contractual relationships that undermined the basic trust needed for such a large investment in mostly unmovable plant, equipment and mine workings.¹²
- Limited capacity for domestically funded investment from either the private or public sectors;
- Conflict and political violence, which destabilise both the business and regulatory environment;
- Following the introduction of the 2013 Mineral Code, there have been at least 63 cooperative that have been licenced to carry out Artisanal or Small-scale Mining (ASM) activities. However, most of these licenses are now due to expire. Moreover, and in general, these artisanal companies sell their products to *Comptoirs* companies that buy from artisanal companies and export to products to different parts of the world – a practice that has been linked to fraud in terms currency repatriation totalling 44.013.672,68\$¹³ followed by a counterproductive decision of the minister of Hydraulic, Energy and Mine of 27th November 2019 suspending licences for *comptoirs*

¹² Europa Publications, *Africa South of the Sahara 2004* (Psychology Press 2003)

¹³ Burundi Eco Hebdomadaire socio-économique: Secteur minier: Alarme rapatriement des devises: <<http://burundi-eco.com/secteur-minier-alar-me-rapatriement-des-devises/#.XdxMvOj7SUK>>, Accessed on 25th November 2019

buying gold and granting monopoly of buying and exporting gold produced in Burundi to the Banque of the Republique of Burundi¹⁴;

- a lack of management skills, export traceability, transparency issues are part of the challenges that Burundi faces to a larger degree compared to many other countries in east Africa, notably including Rwanda;
- Outdated, overlapping and even “absent” mineral law and regulation of the sector: e.g. the Mining and Petroleum Code of 1976 and its implementing order of 1982 and the Land Code 1986 were widely considered outdated, however the Code remains in place – partly, that is just for petroleum and not for mining, which received its new code in 2013, leading to increased regulatory complexity.¹⁵ Moreover, the new Mining Code of 2013 did not include trade or market for the minerals extracted through artisanal mining, which sub-sector had to wait until the introduction of *Loi n°1/015 du 11 août 2000 fixant les dispositions particulières relatives aux comptoirs d’exploitation, d’achat et d’exportation des substances minérales extraites artisanalement au Burundi ou y importées*, but that was later abrogated in 2013. Two years later a new law, and Mining Code, came into force, namely the *Loi N°1/ 21 du 15 octobre 2013 relative au Code Minier du Burundi* (Burundi Mining Law No 1/21 of 15th October 2013), and which relates to both large scale and artisanal mining. This new law advances and regulates the mining sector regulatory regime in Burundi although it is doubtful whether the government’s capacity to implement the changes and enforce governance reforms on the ground.¹⁶ Indeed, it is argued that many stakeholders have witnessed that in practice “the law does not exist.”¹⁷
- Weak governmental institutions, including: the Directorate General of Geology and Mines (DGGM: *Direction Générale de la Géologie et de Mines*) under the Ministry of Energy and Mines (MEM) that manages the mining and quarries industry; the *Laboratoire de Contrôle et d’Analyse Chimique* carrying mineral chemical analysis; and Burundi Revenue authority advising on tax issues. All of these institutions are facing capacity and managerial issues to the point that the mining sector at present more centralised at the minister and president’s office which lead to opacity in licence granting. An example of this is the Jean Jbelly that was awarded a 10 years monopoly by a presidential decree¹⁸ without taking into consideration when it was clear that this

¹⁴ Le Soir.be, Le commerce d'or confié à la Banque centrale du Burundi, une décision critique, <<https://www.lesoir.be/263182/article/2019-11-27/le-commerce-dor-confie-la-banque-centrale-du-burundi-une-decision-critiquee>>, Accessed on 04th December 2019

¹⁵ Inc Ibp, *Guyana Business Law Handbook Volume 1 Strategic Information and Basic Laws* (Int'l Business Publications 2015)

¹⁶ IPIS interviews with civil society representatives, Bujumbura, September 2014

¹⁷ Bamvuginyumvira F., *Analyse de la transparence et de la responsabilité dans la gestion de l’industrie extractive au Burundi : défis et suggestions*, OLUCOME, August 2014, 27

¹⁸ Décret 100/71 du 8 mars 2013 portant autorisation de concession pour le raffinage et le marquage par code barré de l’or au Burundi à la société “Ets Jean Jbeili”

company was not able to or at least would retard starting its refinery activities.¹⁹ Another example is the CIAAMS concession (*Consortium International d’Affaires de l’Alliance Mondiale des Sports*) that was awarded on 18th October 2013, three days after the new mineral code was introduced. It raised unanswered questions as to when and how this concession was negotiated and whether the bidding process was followed or that the company was scrutinised enough to be granted that concession. Subsequently, the concession was revoked on 27th August 2018.²⁰

¹⁹ Gilbert Midende. 'Les exploitations minières artisanales du Burundi' (2009) 2010 L'Afrique des grands lacs—Annuaire 45

²⁰ Décret n°100/0124 du 27 août 2018 portant révocation du permis d’exploitation minière sur les gisements de nickel et minerais associés de waga et nyabikere accordé au Consortium International d’Affaires de l’Alliance Mondiale des Sports « CIAAMS »

2.2 Rwanda

Like its neighbour Burundi, Rwanda has gone through different regime changes that have affected the level of development in different economic sectors.

The following table provides the duration of political regimes post-Independence:

No	President	Took office	Left Office	Time in Office	Notes	Prime Minister
1	Grégoire Kayibanda	26/10/1962	05/07/1973	10 years, 221 days	Elected and deposed	
2	Juvenal Habyarimana	05/07/1973	06/04/1994	20 years, 274 days	Coup and Died in a plane.	Agathe Uwiringiyimana
3	Théodore Sindikubwabo	08/04/1994	19/07/1994	101 days	Interim President	
4	Pasteur Bizimungu	19/07/1994	24/03/2000	5years, 249 days	Resignation	Paul Kagame Vice-President
5	Paul Kagame	25/03/2000	22/04/2000	27 days	Selected	Interim President
6	Paul Kagame	22/04/2000	Present	19 years plus	Selected and elected thereafter	Eduard Ngirente

2.2.1 Introduction

Before independence, Rwanda was a monarchy until 1961 when Rwanda voted to abolish the Tutsi monarchy and Dominique Mbonyumutwa becomes the provisional president of Rwanda that became independent on 1st July 1962 and the first president Grégoire Kayibanda elected took office on 26th October 1962.

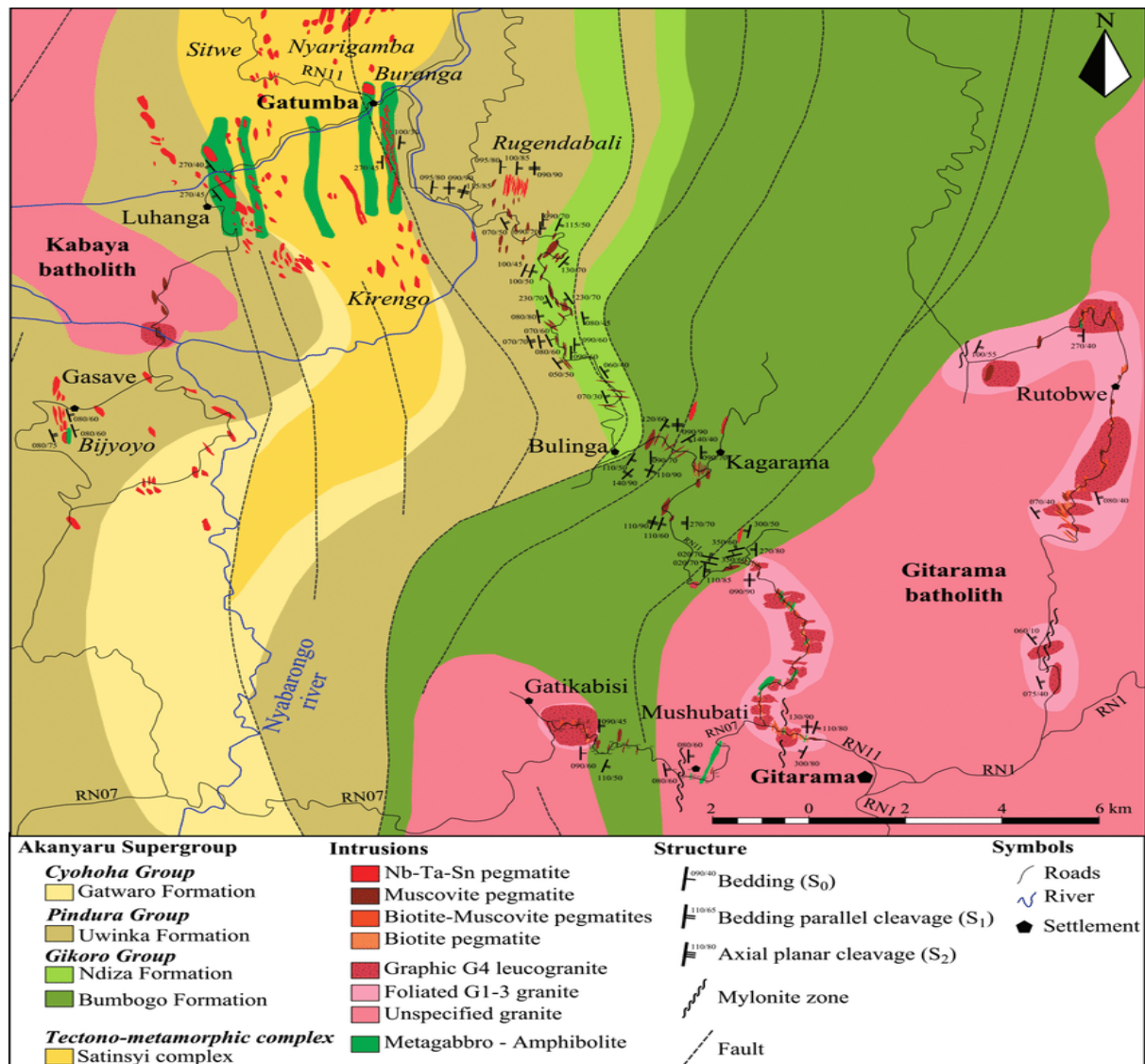
Since then, the history of Rwanda has had different regime changes that have affected the mineral sector.

According to Tack et al., Rwanda hosts numerous rocks of the Kibara Orogeny comprising predominantly of the basement and mezoproterozoic rocks that have been intruded by rocks of bimodal magmatic.²¹ From the mineralisation of those and other rocks that occurred in pegmatite and quartz vein the Niobium-Tantalum (Nb-Ta), Tin (Sn) and Tungsten (W) were

21 L. Tack and others. 'The Northeastern Kibaran Belt (NKB): a long-lived Proterozoic intraplate history' (21st Colloquium African Geology (CAG21) 2006) 03

formed.²² The geology of Rwanda consists of the Meso Proterozoic formations of tertiary age, East African Rift Valley, volcanic cover that extend to South Kivu, Cyangugu and the North-western Birunga mountains. They comprise three lithological unites of different and complex sequences of sedimentalisation subdivided into four stratigraphic groups the youngest being that of Gikoro, followed by that of Pindura, the third being that of Cyohoha and the fourth that of Rugezi.

The described groups are shown on the following map that depicts Gitarama area:

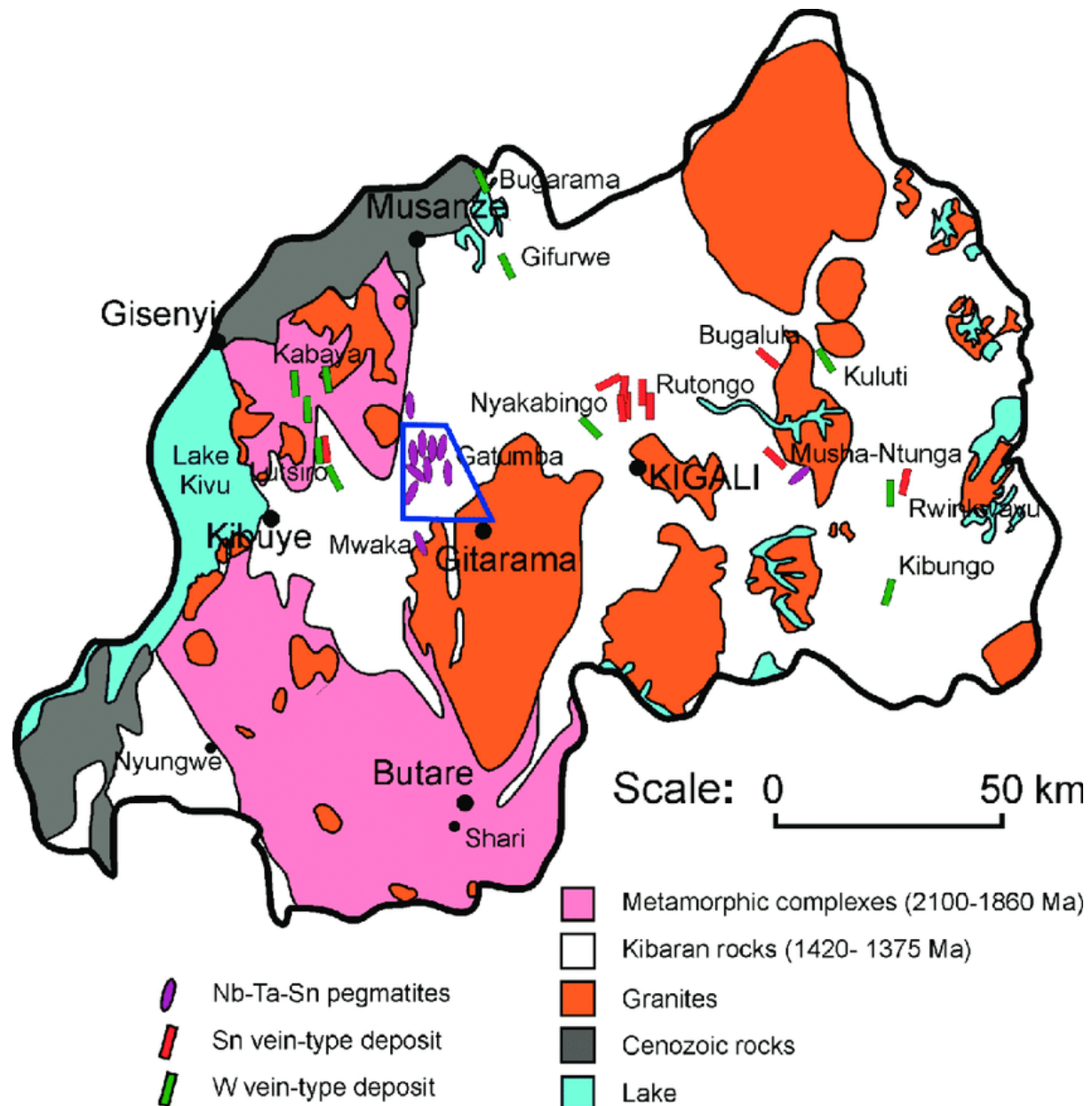


Source: Geological map of the Gatumba-Gitarama area (geological map after Theunissen *et al.* 1991; Nb-Ta-Sn pegmatite outcrops based on Varlamoff 1954 and Dewaele *et al.* 2011).

22 Stijn Dewaele and others. 'Cassiterite and columbite mineralization in pegmatites of the northern part of the Kibara orogen (Central Africa): the Gatumba area (Rwanda)' (2007) 2 Irish Association for Economic Geology Proceedings 1489; W. Pohl and M. A. Günther. 'The origin of Kibaran (late Mid-Proterozoic) tin, tungsten and gold quartz vein deposits in Central Africa: a fluid inclusions study' (1991) 26(1) Miner Deposita 51; W. Pohl. 'Metallogeny of the northeastern Kibara belt, Central Africa—Recent perspectives' (1994) 9(2) Ore Geology Reviews 105

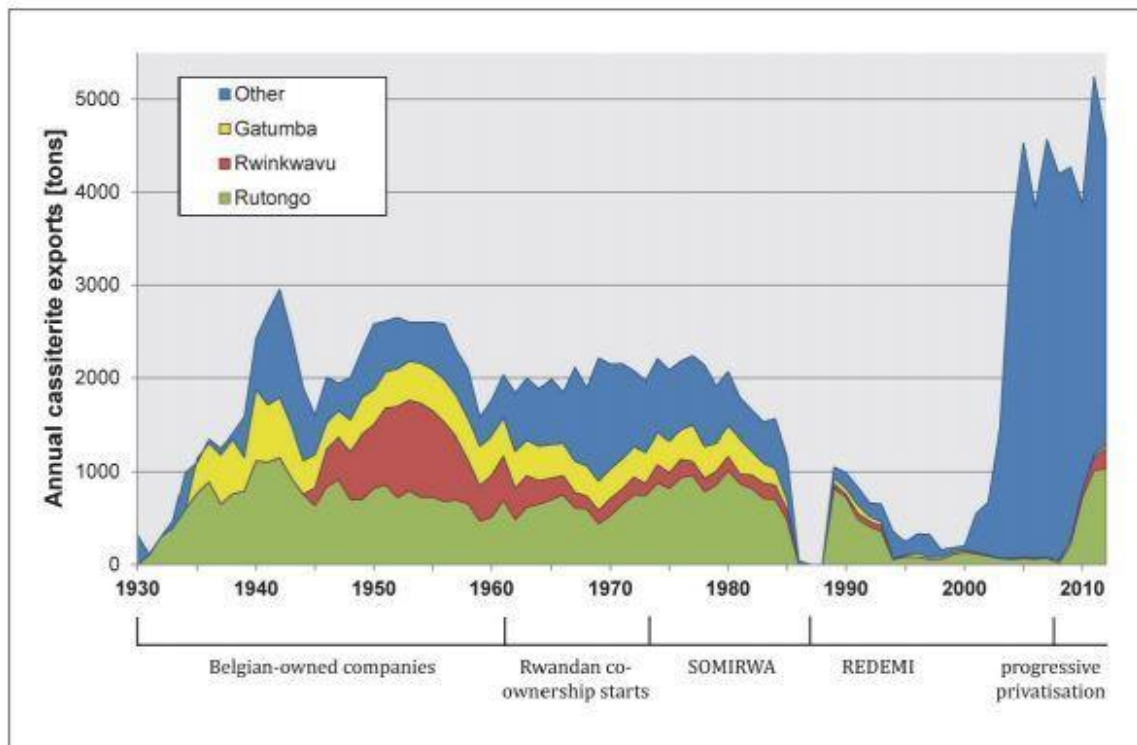
The above map and other surveyed areas and geological studies have proved that Rwanda is rich in the 3T minerals as provided by the following map directly overleaf.

Please see below a simplified geological map showing the main ore deposits in Rwanda (after Baudin et al.):



Source: Simplified geological map with the main ore deposits in Rwanda (after Baudin et al. 1979, Fernandez-Alonso et al. 2007).

The following figure shows the trend of cassiterite exports and companies involved from 1930 to 2010:



Source: Schütte, P., 2014.²³

The above graph shows the trend of cassiterite from 1930 to 2010 and companies that were involved in the mining sector. These minerals were exploited before the independence after their discovery in 1926 following Belgian geological missions discovered cassiterite and developed it at Gatumba. Around 1930, Belgian companies for example MINETAINE, GEORWANDA, SOMUKI and COREM, MARSHALL, STINGLHAMBERT, GREENS, CARDINAEL, DE BORCHGRAVE were involved in mining. Schütte and Limbaugh argue that early production were around 2,500-3,000 tonnes of cassiterite and other 3T minerals (i.e. cassiterite – as above, and for tin, wolframite - for tungsten, and coltan - for tantalum)) per year and reached its peak during the World War II and the Korean War due to their strategic use in munitions and tools during the war. Ensuring an adequate and steady supply of strategic raw materials was the priority.²⁴

²³ Schütte, P., 2014. Rwanda tin production country profile, in DERA (German Mineral Resources Agency), Tin – Supply and Demand until 2020, DERA natural resources information series no. 20 (translated; original in German)

²⁴ Id., Ronald H. Linebaugh Strategic Metals and National Defence: Tungsten in World War II (and Beyond), The History Journal, 2006

2.2.2 The Years 1973 to 1999

The Rwandan government started to be involved in the mining sector in 1973 with the creation of SOMIRWA (*Société Minière du Rwanda*) a company in which the Rwanda government held 49 percent share. It grouped all the private companies with a view to strengthening the mining sector. A tin smelter was constructed at Karuruma in 1982 for a production of 3,000 tonnes per year. However, SOMIRWA was bankrupt in 1985 as a result of the October 1985 tin market under the International Tin Council (I.T.C) the operating arm of the International Tin Agreement (I.T.A) collapse due to insolvency and suspension of stabilising activities.²⁵

The collapse of the tin market coincided with the collapse of the international coffee market which led the government to changing policy to develop the mining sector. In 1988, COOPIMAR (*Cooperative de Promotion de l'Industrie Minière Artisanale au Rwanda*) was created to organise small miners to increase production whereas in 1989 REDEMI (*Régie d'Exploitation et de Développement des Mines*) started to maintain the existing mines whilst looking for new investors in large projects a timid nationalisation. Neither COOPIMAR nor REDEMI had made little efforts to progress from high manual labour to semi-mechanised mining. Indeed, records show that by the end of 1990 2,460 small-scale miners were under the COPIMAR structure with upwards of 7,500 in low agriculture seasons. On the other hand, REDEMI reported at the end of the same year 2,798 permanent employees with 148 sub-contractors. They also acted, *de facto*, as mineral traders. The two approaches did not improve the sector particularly given that artisanal miners were also involved in diversifying out agriculture.²⁶

2.2.3 Post-1999 Turnaround

After the terrible events of the 1990s, from the following decade onwards the mining sector slowly and then more confidently rebounded. For example, a progressive programme of privatisation was initiated in 2001 and that ended the *régie* system in 2007. The new approach instead embraced the concession and licence models with a view to attracting private sector investors.

In addition, formalised artisanal mining cooperatives were initiated through the FECOMIRWA (*Fédération des Coopératives*). The Rwandan government recognised and recognises the need for formalisation of the mining sector through effective property rights and organisational representation that allows ASM to better access market opportunities. Furthermore, the Rwandan Mining Association that groups all mining actors was registered in 29th March 2012 and granted legal personality on 27th August 2012 and operating under the Private Sector

25 Mallory, Ian A., 1989, Conduct Unbecoming: The Collapse of the International Tin Agreement, American University International Law Review, Vol.5, 3

26 Nishiuchi, Toru; Perks, Rachel Bernice. 2014. *Unearthing the subsoil : mining and its contribution to national development (English)*. Rwanda economic update; edition no. 6. Washington, DC ; World Bank Group. <http://documents.worldbank.org/curated/en/908721468307137337/Unearthing-the-subsoil-mining-and-its-contribution-to-national-development>

Federation (PSF). It is composed of foreign investors holding big concessions represented by the Rwandan Mining Investment Forum (RMIF), cooperatives represented by FECOMIRWA, medium and individuals' companies. At the time of writing, Rwanda Mining Association has 269 members.

Legal/ regulatory reform has also been undertaken, notably: Rwanda's main mining law of 2008 was replaced by a new one in 2014 that was abrogated by the new Law N0 58/2018 of 13/08/2018 on mining and quarry operations to reflect the development of the sector. The new law seeks to promote professionalism and growth of the mining sector, to address the health and safety of workers, environmental concerns, raise productivity and gender equality in mining. It also tackles licensing, illegal mining and the safety of the communities in the vicinity of the mines to comply with international standards and attract more investors.²⁷

Regarding mined output, during the period 2011 - 2017, there has been a marked increase in the combined export values of the 3T concentrates that reached \$154 million in 2011, \$136 million in 2012, \$228 million in 2013, \$373.4 million generated income in 2017.²⁸

2.2.4 Prognosis - Rwanda

In recent years, the Rwanda government has delivered active support and leadership of the mining sector, consistent with a *dirigiste* approach to economic development and, in this instance, mining-led economic development. The above paragraphs detail progress since 2000, when Kagame first became president.

The picture is nuanced, however: notably, the progressive programme of privatisation noted above, combined with the move to a mining concessions based minerals regime, could also be considered more *laissez-faire* in its approach too, and since the fact of privatisation reduces the level of direct State control, this can be identified as a counter-trend to the main one of *dirigisme*.

Overall, and whichever characterisation is utilised, many successes are apparent with respect to mining for development in Rwanda, including:

- a legal and institutional framework and delivery plan;
- policy implementation;
- increase in mined production, export and revenues;
- enhancement and implementation of internationally accepted mineral traceability system;
- enhancement of geological ascertainment of Rwanda's minerals; and

²⁷ Law N0 58/2018 of 13/08/2018 on mining and quarry operations

²⁸ Rwanda Development Board, Investment opportunities mining overview < <https://rdb.rw/investment-opportunities/mining/> > Accessed on 29th November 2019

- capacity building, both of minerals sector institutions and through human resources development²⁹

However, whilst the overall prognosis for mining sector led development in Rwanda is positive, there are some gaps that need improvement to further increase production. These include facilitating skills and knowledge transfer within the mining sector and improving access to credit.

In relation to facilitating skills and knowledge, the Rwandan government could lead a scheme between mineral supply chain members aimed at improving the business, financial and technical skills of smaller mining companies and cooperatives to professionalise the mining sector.

With regard to facilitating access to credit, in addition to the financial sector's role that needs to diversify sources of credit that would improve companies and cooperatives control over financial management, commercial relationship and allow funding for other activities leading to implementing appropriate mechanisation, the government could play an important role in the process of lending by guarantying loans and credit to small companies and cooperatives for prospecting, exploration or exploitation activities. Cooper *et al.*, suggest that small-scale financing options that might involve a proportion of mining royalties to an investment fund for mining development would provide important impetus to upgrade exploration, mining and recovery process.³⁰

3. Conclusion

Overall, the prognosis for mining-led economic development in Rwanda seems far more hopeful than that for Burundi, with which it shares so much common history. The fact of peace in Rwanda contrasted with the ongoing conflict in Burundi is likely to be an important factor in that divergent prognosis. Additionally, it is identified that Rwanda's government has, in the period of this century at least, taken an active leadership role with respect to minerals sector development and mining for development, consistent with the concept of economic *dirigisme*, and nuanced with elements of more *laissez faire* economics. As correlation does not equal causation, we suggest that caution is applied to any attempt to generalise *dirigisme* with successful design and implementation of mining sector-led economic development; instead, the authors present the above two national case studies purely on their own merits. We hope that this Insight provides a catalyst for constructive debate regarding mining for development and, more generally, extractives for development too.

29 MINIRENA, Unfolding the Rwandan Mining Sector, 2016

30 Rupert Cook and Paul Mitchell. 'Evaluation of mining revenue streams and due diligence implementation costs along mineral supply chains in Rwanda' (2014) Federal Institute for Geosciences and Natural Resources, BGR, ed. Hanover: Germany

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