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Development pathways for the DRC to 2050

Annexure

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Current Path

This project used IFs version 7.54 with an updated IFsHist file dated October 2020. Amongst other updates, the IFsHist file included the IMF global growth forecasts that were released in October 2020, reflecting the IMF growth forecast for 2020 and 2021 amidst the COVID-19 pandemic.

The following data amendments were made to the IFs Current Path forecast for the DR Congo in the form of a project data file:

Chart A1: Project data

Series updated	Definition	Source	
PopulationYouthDep%	Population of young people (<15) as percent of total	World population prospects	
PopYouthBulgeBy15	Youth bulge	World population prospects	
HealthMalarDthsper100000	Malaria deaths per 100 000	WHO World malaria reports, 2009–2019	
IncBelow1D90c%WDI	Population below poverty line of $1.90	World Bank estimates	
Corruption	Level of corruption	Transparency international	
Freedom	Civil and political freedom	Freedom house	
AgProdCereals	Production of cereals	FAO	
GovExpense%GDP	Government expense as % of GDP	Government financial statistics database, IMF	
GovtDebt%GDP	Central government debt as % of GDP	World economic outlook database, IMF	

RoadsTotalNetwork	Roads, total network, kilometres	CIA factbook 2019
WSSJMPWaterTotal%OtherImproved	Access to other improved water (%)	WHO/UNICEF JMP global database
WSSJMPWaterTotal%Piped	Access to piped water (%)	WHO/UNICEF JMP global database
WSSJMPSanitationTotal%Improved	Access to improved sanitation (%)	WHO/UNICEF JMP global database
RoadsPaved%	Roads paved	CIA factbook 2019
PolityDemoc	Polity project's measure of autocracy	Centre for Systemic Peace
PolityAutoc	Polity project's measure of democracy	Centre for Systemic Peace

Scenario interventions

All interventions are from 2024, interpolate to 2034 and then are maintained at that level until 2050 unless indicated otherwise.

Chart A2: Improved governance scenario component

Interventions and parameters	Adjustment in IFs	Benchmark/Justification/Notes
Increase governance effectiveness (goveffectm)	Interpolate from 1 to 1.2	Between 2005 and 2010, Ethiopia increased government effectiveness score by more than 50%. On the Current Path, government effectiveness score increases from 0.9 in 2024 to 1.6 by 2050 (out of possible 5). The intervention brings it to 2.4 by 2050 which is slightly above low-income Africa but below the projected score for Rwanda, Malawi and Burkina Faso by 2050.
Reduce	Interpolate from 1 to 1.2	The score for Tanzania increased by

corruption (govcorruptm)		about 58% between 1998 and 2008. The score on government corruption index increases by 47% between 2024 and 2034 and about 50% relative to the Current Path by 2050, above the projected average for low-income Africa but on par with the projected score for Malawi by 2050.
Improve democracy (democm)	Interpolate from 1 to 1.1	Between 2012 and 2017, the score of Burkina Faso increased by 60%. The scenario accelerates democratisation. The DR Congo's score on the Polity Index increases by nearly 15% between 2024 and 2034. The DR Congo's score by 2050 is above the projected average for low-income Africa but on par with Burkina Faso.
Improve gender empowerment (gem)	Interpolate from 1 to 1.4	Zambia improved its gender empowerment score by nearly 57% between 1995 and 2009. The DR Congo performs poorly in gender empowerment. Gender discrimination with respect to labour force participation, as well as with political representation is rampant in the country. Even with this aggressive intervention, the score of DR Congo increases by about 40% between 2024 and 2034 and remains far below the average for low-income Africa by 2050.
Improve governance security (govriskm)	Interpolate from 1 to 0.9	Government security index improves by 37.6% between 2024 and 2034, slightly above the projected average for low-income Africa but par with Rwanda by 2050.
Reduce societal violence (conflict and terror) (svmulm)	Interpolate from 1 to 0.9	Conflicts have prevented the country from reaching its full potential in harnessing its natural wealth. Long-term peace is therefore necessary to harness fully its immense natural resource endowments.

Reduce the probability of State failure (internal war) (sfintlwaradd)	Interpolate from 0 to -0.2	The probability of state failure decreases by 60% between 2024 and 2050 but still remains above the projected average for low-income Africa.

Chart A3: Basic infrastructure scenario component

Interventions and parameters	Adjustment in IFs	Benchmark/Justification/Notes
Increase investment in renewable energy (Eninvtm)	Interpolate from 1 to 1.2	From a very low base, renewable energy production doubled in Ethiopia between 2004 and 2011. From a very low base, renewable energy production in the DR Congo increases by 68.7% between 2024 and 2034.
Increase access to electricity (Infraelecaccm) (Rural)	Interpolate from 1 to 1.5	Between 1994 and 2004, electricity access in rural area increased by about 46% in Nigeria. In this scenario component, access to electricity in rural areas increases from 2.8% of rural population in 2024 to 39% by 2050 against 24.3% on the Current Path. Despite this aggressive intervention, it remains far below the projected average of 60% for low-income Africa by 2050.
Increase access to electricity (Infraelecaccm) (Urban)	Interpolate from 1 to 1.15	Between 2003 and 2013, The Gambia increased electricity access by about 33% in urban area. Access to electricity in urban areas increases from 48.3% in 2024 to about 91% by 2050 against 78.5% on the Current

		Path. It is slightly above the projected 88% for low-income countries in 2050 but on par with Rwanda.
Increase roads paved length (Infraroadpavedpcntm)	Interpolate from 1 to 1.1	Between 2004 and 2008, Burkina Faso increased its roads paved length by 28%. In this scenario, the paved roads network increases from 5.2% of total roads network in 2024 to about 36% by 2050, below the projected average for low-income Africa (48%) by 2050.
Increase access to fixed broadband Internet (ICT) (Ictbroadm)	Interpolate from 1 to 1.4	Fixed broadband subscriptions per 100 people increased by about 160% between 2011 and 2016 in Uganda. Fixed broadband Internet subscriptions in the DR Congo increase from 3 subscriptions per 100 people in 2024 to 41.6 subscriptions per 100 people by 2050, on par with Burkina Faso.
Increase access to mobile broadband (ICT) (Ictbroadmobilm)	Interpolate from 1 to 1.4	In Burkina Faso, mobile broadband Internet subscriptions per 100 people increased from nine to 29 subscriptions per 100 people between 2013 and 2017 (over 200% increase). Mobile broadband Internet increases from 25.8 subscriptions per 100 people in 2024 to 142 subscriptions per 100 people in 2050, in line with the projected average rate for low-income Africa by 2050.
Increase access to safe Water (Watsafem)	Interpolate from 1 to 1.2	Access to safe water in Ethiopia increased by about 69 % between 2005 and 2015. This intervention increases access to improved water by about 30% between 2024 and 2034 and reaches 97.5% of the population by 2050, slightly above low-income Africa (95%) but on par with Burundi and Ethiopia.
Increase access to improved sanitation	Interpolate from 1 to 1.5	From 2000 to 2015, access to improved sanitation increased from

(sanitationm)		9.5% to 22.5% (more than double) in Burkina Faso. This intervention increases access to improved sanitation from 23.5% in 2024 to about 66% by 2050 against 46.5% on the Current Path by 2050. Despite this aggressive intervention, it remains below the projected average for low-income Africa by 2050.

Chart A4: Agriculture intervention scenario component

Interventions and parameters	Adjustment in IFs	Benchmark/Justification/Notes
Increase crop yields (ylm)	Interpolate from 1 to 1.25	Between 2011 and 2016, Mozambique and Sierra Leone increased average yields by more than 50%. Crop yields in the DR Congo increase by 50% between 2024 and 2050 to reach 5.4 tons/hectare, above the average for low-income Africa but far below the projected crop yields for Rwanda and Malawi by 2050.
Increase crop land (ldcropm)	Interpolate from 1 to 1.2	Burkina Faso increased crop land by 44% between 1995 and 2005. This intervention increases crop land by about 2.4 million hectares between 2024 and 2050.
Increase land area equipped for irrigation (Landirareaequipm)	Interpolate from 1 to 1.2	Between 2001 and 2011, land area equipped for irrigation increased by more than 100% in Burkina Faso. Land area equipped for irrigation in the DR Congo increases by 27 000 hectares relative to the Current Path by 2050.
Reduce agriculture loss from producer to consumer	Interpolate from 1 to 0.8	The poor transport infrastructure in the DR Congo causes huge losses

(aglosstransm)		when transporting agricultural production from producer to the consumer. This intervention reduces agriculture loss along the value chain by about 13% between 2024 and 2050.
Increase calories per capita (clpcm)	Interpolate from 1 to 1.15	Calorie per capita increased in Rwanda between 1997 and 2002 by 23%. Calories per capita in the DR Congo increase by 23% between 2024 and 2034 to reach 2 502 kcal in 2050, slightly above the projected average for low-income Africa but below Malawi and Guinea. It is projected to be 2 243 kcal on the Current Path in 2050.

Chart A5: Family planning and human capital scenario component

Interventions and parameters	Adjustment in IFs	Benchmark/Justification/Notes
Increase contraceptive use (contrusm)	Interpolate from 1 to 1.35	Between 2000 and 2005, the contraceptive use rate doubled in Ethiopia. This intervention increases modern contraception use from 25.7% in 2024 to 72% of fertile women in 2050 against 51.6% on the Current Path in the same year. This is above the projected average for low-income Africa but below the level of Ethiopia (78% by 2050).
Reduce malaria prevalence (hlmalariaprevm)	Interpolate from 1 to 0.9	Between 2005 and 2015, malaria prevalence in Ethiopia declined by about 70%. This intervention brings malaria prevalence in the DR Congo in line with the projected values for Ethiopia and Malawi by 2050.
Increase access to clean cooking	Interpolate to 0.7	This intervention brings it in line with

(improved cookstoves) (cookstovesadd)		the projected average for low-income globally by 2050.
Reduce child (under 5) mortality (hlmortcdchldm) (Total)	Interpolate from 1 to 0.9	Ethiopia reduced child mortality by 40% between 2006 and 2016. In this scenario, child mortality decreases by 33% between 2024 and 2034.
Increase primary education survival rate (edprisurm) (Total)	Interpolate from 1 to 1.1	The Gambia increased primary education survival rate by about 22% between 2005 and 2015. Primary education survival rate in the DR Congo increases from 53.8% in 2024 to 84% by 2050, on par with the projected average for its peers in the same year.
Improve the quality of primary education (edqualpriallm)	Interpolate from 1 to 1.1	Chad improved its score by 15% between 1995 and 2005. The score of the DR Congo improves by 15.3% between 2024 and 2034, on par with low-income Africa by 2050.
Increase lower secondary graduation (edseclowrgram) (Total)	Interpolate from 1 to 1.2	Guinea increased its lower secondary completion rate by 32% between 2015 and 2019. Lower secondary completion (graduation) rate increases by 32.5% between 2024 and 2034, on par with its peers by 2050.
Increase upper secondary graduation (edsecupprgram) (Total)	Interpolate from 1 to 1.2	Uganda increased its upper secondary education graduation rate by about 29% between 2015 and 2019. This intervention increases the DR Congo's upper secondary education graduation rate by 40% between 2024 and 2034, in line with low-income Africa by 2050.
Increase vocational training in upper secondary school (Edsecupprvocadd)	Interpolate to 5	Participation rate in vocational training in Niger increased from 15.34% in 2005 to 37.18% in 2015 (more than double). This intervention

		puts the participation rate in vocational training in the DR Congo at 36.6% by 2050, slightly above the average for low-income Africa but below the level of Niger.
Improve the quality of secondary education (edqualsecallm)	Interpolate from 1 to 1.1	Burundi's score increased by about 10% between 2015 and 2019. The score of the DR Congo improves roughly by 15% between 2024 and 2034, in line with the projected average for low-income Africa by 2050.
Increase tertiary intake rate (edterintm)	Interpolate from 1 to 1.4	From a very low base, tertiary intake in Burundi increased by nearly 90% between 2010 and 2015. In this scenario component, tertiary intake in the DR Congo increases by 43% between 2024 and 2034.
Increase graduation rate in tertiary education (Edterscieshradd) (science & engineering)	Interpolate to 2	From a very low base, the share of science and engineering students in tertiary graduates in Sierra Leone increased by more than 80% between 2015 and 2019. The share of science and engineering students in tertiary graduates in the DR Congo increases from 11% in 2024 to 19% by 2050, on par with the projected average for low-income Africa in the same year.

Chart A6: Economic transformation scenario component

Interventions and parameters	Adjustment in IFs	Benchmark/Justification/Notes
Improve business regulation (govbusregindm)	Interpolate from 1 to 0.8	Between 2014 and 2018, regulatory quality in Ethiopia improved by more than 50%. The score for regulatory quality in the DR Congo increases by about 58% between 2024 and 2050, in line with the average for low-income countries.

Improve economic freedom (econfreem)	Interpolate from 1 to 1.05	Rwanda improved its score for economic freedom by about 23% between 2000 and 2010. In this scenario, the DR Congo's score improves by about 14% between 2024 and 2034 to reach 6.7 (out of possible 10) by 2050, slightly above the average for low-income Africa but far below the level of Rwanda.
Improve domestic investment in the economy (Invm)	Interpolate from 1 to 1.2	Domestic investment as a share of GDP in the DR Congo is lower than in a country like Uganda, Rwanda and Ethiopia. This intervention increases domestic investment (% of GDP) by 22% between 2024 and 2034 to reach 21% of GDP by 2050, below the average for low-income Africa.
Improve FDI inflow	Interpolate from 1 to 1.2 Starting from 2025	The current level of FDI flows to the DR Congo is far below the country's potential. FDI flows to Mozambique increased from 4% of GDP to 18% between 2007 and 2017 (14 percentage points). This intervention puts FDI flows to the DR Congo at 5.5% of GDP by 2050, on par with Uganda and Malawi.
Increase manufacturing export (xsm)	Interpolate from 1 to 1.05	Manufacturing exports as a share of GDP increased by 15% in Ethiopia between 2015 and 2019. Manufacturing exports as a share of GDP increases by about 13% compared to the Current Path in 2050.
Incentivise R&D (gdsm)	Interpolate from 1 to 1.2	Government expenditure on R&D activities is almost non-existent in the DR Congo. This invention increases government expenditure on R&D by 66% compared to the Current Path in 2050. Despite this intervention, it remains far below the projected average for low-income Africa.

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Dr Kouassi Yeboua is a senior researcher in African Futures and Innovation programme in Pretoria. He recently served as lead author on ISS studies on the long-term development prospects of the DR Congo, the Horn of Africa, Nigeria and Malawi. Kouassi has published on various issues relating to foreign direct investment in Africa and is interested in development economics, macroeconomics, international economics, and economic modelling. He has a PhD in Economics.

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