

CHAPTER 1

Model Output

1.1. Africa

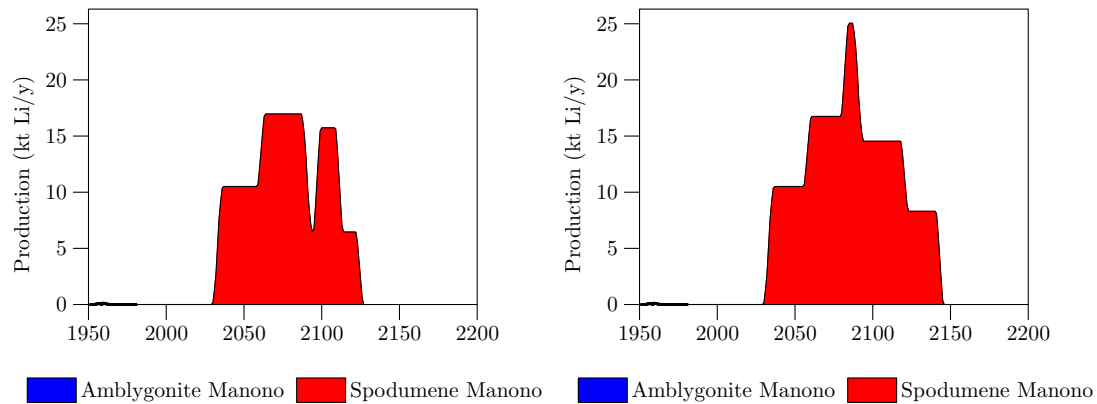
1.1.1. DR Congo.

TABLE 1.1. Mining constants for DR Congo

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Spodumene Manono 1	1954	0.36e-2	1.5	0.1e-2	0.1e-2	50	50	NA	NA
Low Spodumene Manono 2	2030	1145	1.5	5	10	60	80	2070	0.37e-1
Low Amblygonite Manono	1954	0.567	1.5	0.11	0.11	50	50	NA	NA
BG Spodumene Manono 1	1954	0.36e-2	1.5	0.1e-2	0.1e-2	50	50	NA	NA
BG Spodumene Manono 2	2030	1500	1.5	5	10	60	80	2070	0.37e-1
BG Amblygonite Manono	1954	0.567	1.5	0.11	0.11	50	50	NA	NA
High Spodumene Manono 1	1954	0.36e-2	1.5	0.1e-2	0.1e-2	50	50	NA	NA
High Spodumene Manono 2	2030	2300	1.5	5	10	60	80	2070	0.37e-1
High Amblygonite Manono	1954	0.567	1.5	0.11	0.11	50	50	NA	NA

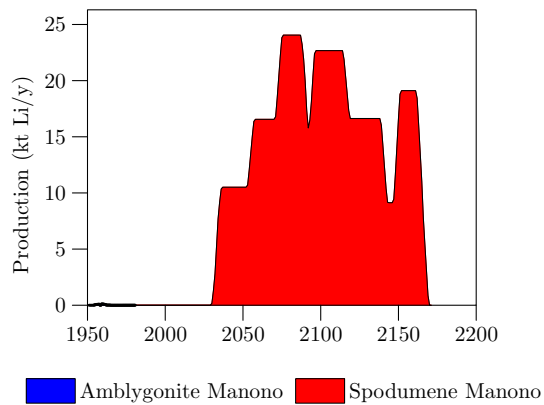
TABLE 1.2. Peak years for DR Congo

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite Manono	1959	1959	1959	0.1	0.1	0.1
Amblygonite Total	1959	1959	1959	0.1	0.1	0.1
Spodumene Manono	2075	2085	2081	17.0	25.1	24.1
Spodumene Total	2075	2085	2081	17.0	25.1	24.1
Lithium	2075	2085	2081	17.0	25.1	24.1



A Low

B BG



C High

FIGURE 1.1. Scenarios for DR Congo

TABLE 1.3. URR values for DR Congo

Type	URR		
	Low	BG	High
Amblygonite Manono	0.6	0.6	0.6
Amblygonite Total	0.6	0.6	0.6
Spodumene Manono	1145.0	1500.0	2300.0
Spodumene Total	1145.0	1500.0	2300.0
Lithium	1145.6	1500.6	2300.6

1.1.2. Mali.

TABLE 1.4. Mining constants for Mali

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Mineral Bougouni	2020	3.7	4	0.2	0.2	60	60	NA	NA
BG Mineral Bougouni	2020	3.7	4	0.2	0.2	60	60	NA	NA
High Mineral Bougouni	2020	13	4	0.5	0.5	60	60	NA	NA

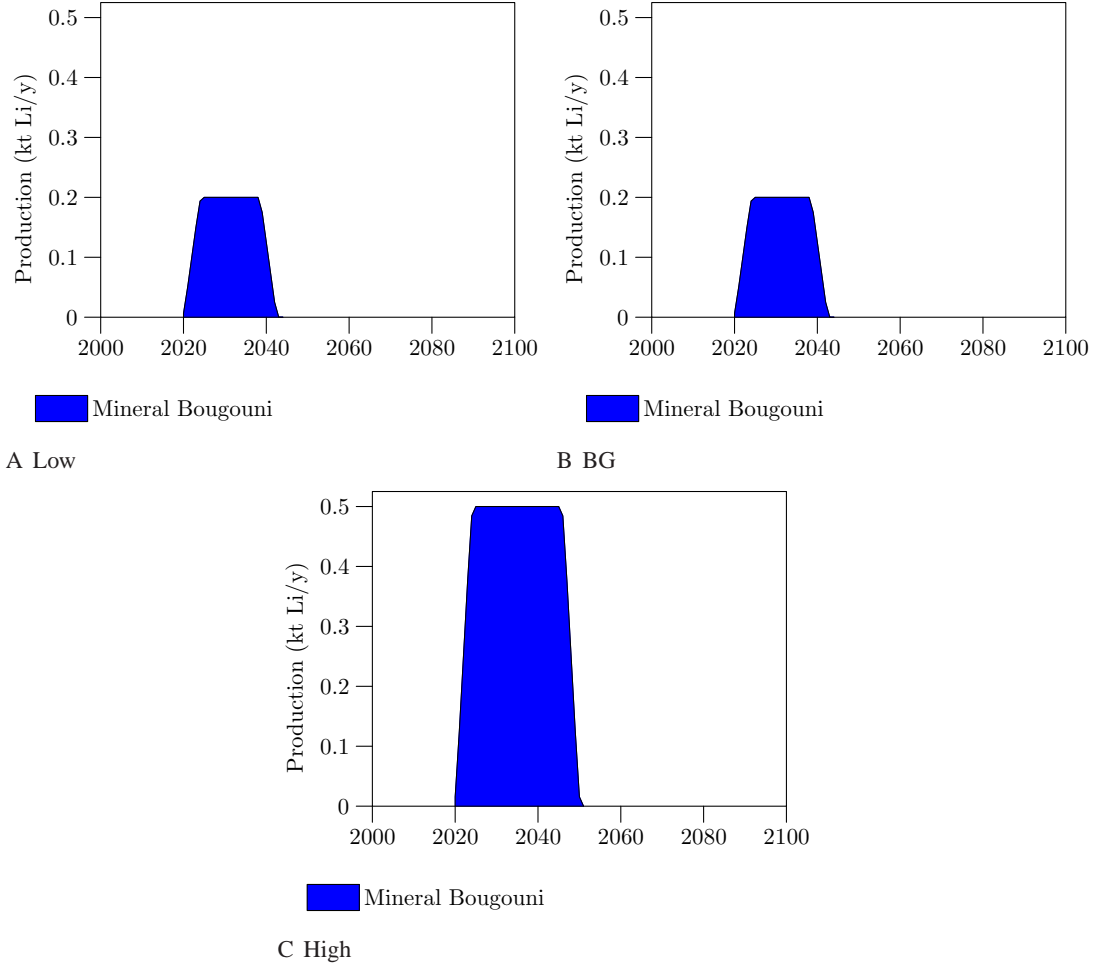


FIGURE 1.2. Scenarios for Mali

TABLE 1.5. Peak years for Mali

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Mineral Bougouni	2031	2031	2035	0.2	0.2	0.5
Mineral Total	2031	2031	2035	0.2	0.2	0.5
Lithium	2031	2031	2035	0.2	0.2	0.5

TABLE 1.6. URR values for Mali

Type	URR		
	Low	BG	High
Mineral Bougouni	3.7	3.7	13.0
Mineral Total	3.7	3.7	13.0
Lithium	3.7	3.7	13.0

1.1.3. Mozambique.

TABLE 1.7. Mining constants for Mozambique

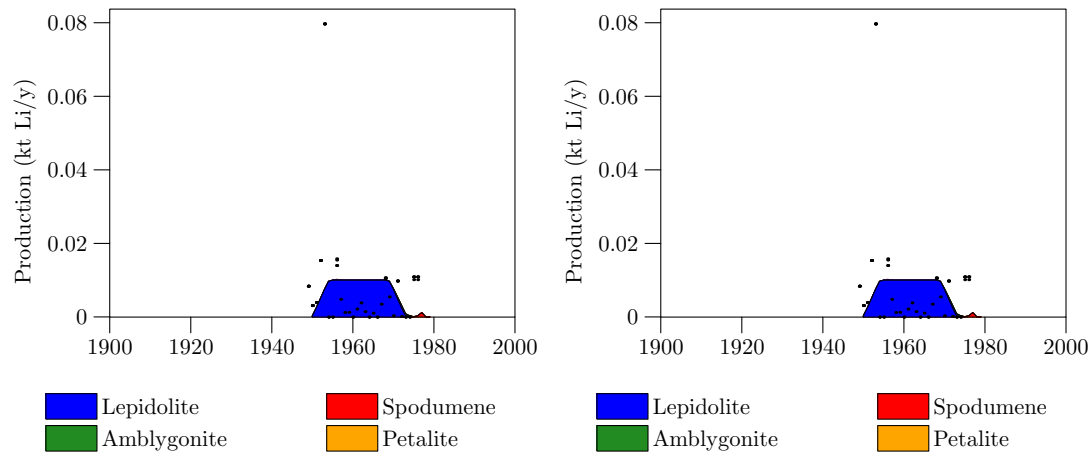
Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Petalite	1955	0.35e-3	4	0.1e-2	0.1e-2	60	60	NA	NA
Low Amblygonite	1969	0.25e-2	4	0.1e-2	0.1e-2	60	60	NA	NA
Low Spodumene	1976	0.15e-2	4	0.1e-1	0.1e-1	60	60	NA	NA
Low Lepidolite	1950	0.190	4	0.1e-1	0.1e-1	60	60	NA	NA
BG Petalite	1955	0.35e-3	4	0.1e-2	0.1e-2	60	60	NA	NA
BG Amblygonite	1969	0.25e-2	4	0.1e-2	0.1e-2	60	60	NA	NA
BG Spodumene	1976	0.15e-2	4	0.1e-1	0.1e-1	60	60	NA	NA
BG Lepidolite	1950	0.190	4	0.1e-1	0.1e-1	60	60	NA	NA
High Petalite	1955	0.35e-3	4	0.1e-2	0.1e-2	60	60	NA	NA
High Amblygonite	1969	0.25e-2	4	0.1e-2	0.1e-2	60	60	NA	NA
High Spodumene	1976	0.15e-2	4	0.1e-1	0.1e-1	60	60	NA	NA
High Lepidolite	1950	0.190	4	0.1e-1	0.1e-1	60	60	NA	NA

TABLE 1.8. Peak years for Mozambique

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite	1972	1972	1972	0.0	0.0	0.0
Lepidolite	1961	1961	1961	0.0	0.0	0.0
Petalite	1956	1956	1956	0.0	0.0	0.0
Spodumene	1977	1977	1977	0.0	0.0	0.0
Lithium	1956	1956	1956	0.0	0.0	0.0

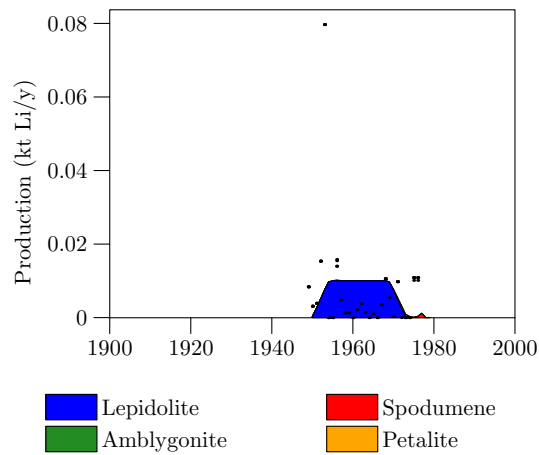
TABLE 1.9. URR values for Mozambique

Type	URR		
	Low	BG	High
Amblygonite	-	-	-
Lepidolite	0.2	0.2	0.2
Petalite	-	-	-
Spodumene	-	-	-
Lithium	0.2	0.2	0.2



A Low

B BG



C High

FIGURE 1.3. Scenarios for Mozambique

1.1.4. Namibia.

TABLE 1.10. Mining constants for Namibia

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Mineral Karibib 1	1950	6.209	4	0.3	0.3	60	60	NA	NA
Low Mineral Karibib 2	2020	5.75	4	0.3	0.3	60	60	NA	NA
BG Mineral Karibib 1	1950	6.209	4	0.3	0.3	60	60	NA	NA
BG Mineral Karibib 2	2020	9.8	4	0.3	0.3	60	60	NA	NA
High Mineral Karibib 1	1950	6.209	4	0.3	0.3	60	60	NA	NA
High Mineral Karibib 2	2020	9.8	4	0.3	0.3	60	60	NA	NA

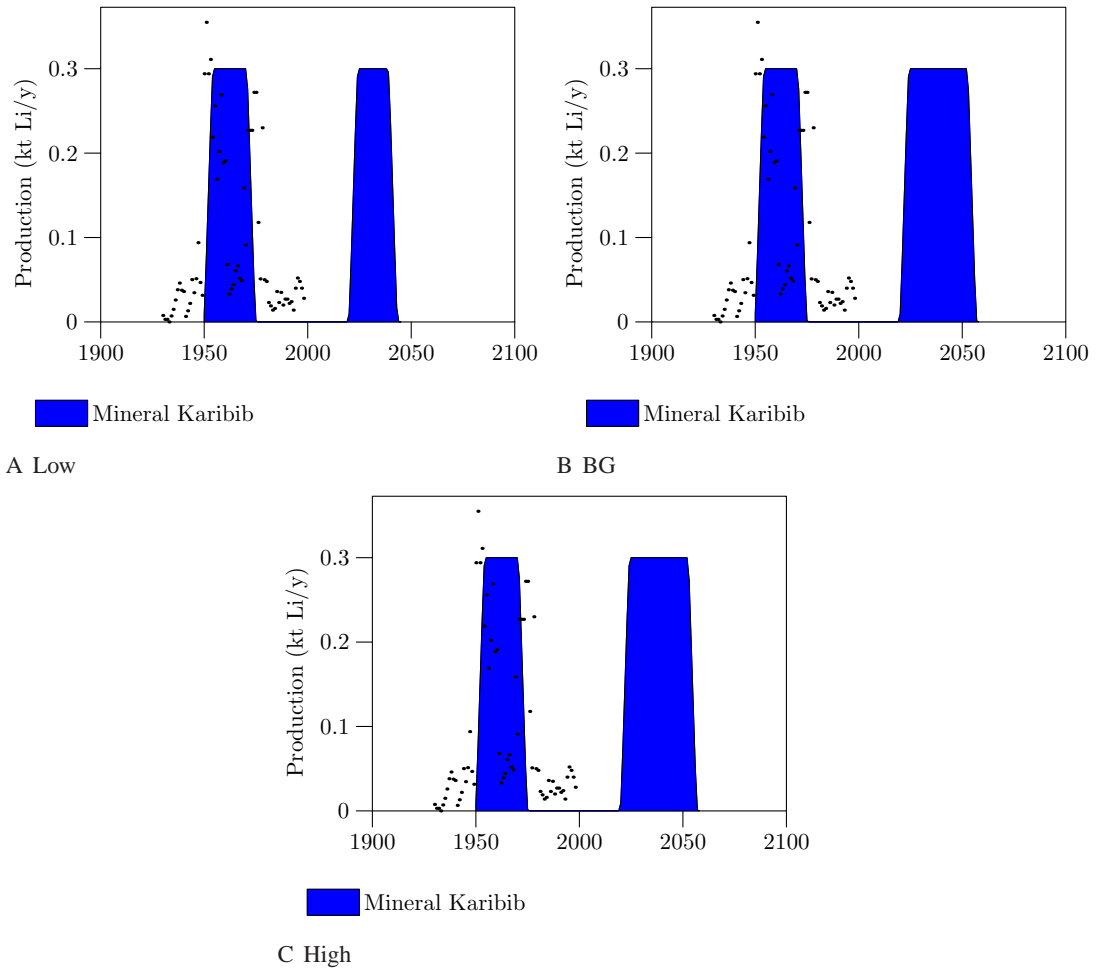


FIGURE 1.4. Scenarios for Namibia

TABLE 1.11. Peak years for Namibia

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Mineral Karibib	1996	2003	2003	0.3	0.3	0.3
Mineral Total	1996	2003	2003	0.3	0.3	0.3
Lithium	1996	2003	2003	0.3	0.3	0.3

TABLE 1.12. URR values for Namibia

Type	URR		
	Low	BG	High
Mineral Karibib	12.0	16.0	16.0
Mineral Total	12.0	16.0	16.0
Lithium	12.0	16.0	16.0

1.1.5. South Africa.

TABLE 1.13. Mining constants for South Africa

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Spodumene 1	1960	0.93e-1	4	0.3e-1	0.3e-1	60	60	NA	NA
Low Spodumene 2	2020	15	4	0.5	0.5	60	60	NA	NA
Low Amblygonite	1952	0.50e-1	4	0.3e-1	0.3e-1	60	60	NA	NA
BG Spodumene 1	1960	0.93e-1	4	0.3e-1	0.3e-1	60	60	NA	NA
BG Spodumene 2	2020	15	4	0.5	0.5	60	60	NA	NA
BG Amblygonite	1952	0.50e-1	4	0.3e-1	0.3e-1	60	60	NA	NA
High Spodumene 1	1960	0.93e-1	4	0.3e-1	0.3e-1	60	60	NA	NA
High Spodumene 2	2020	15	4	0.5	0.5	60	60	NA	NA
High Amblygonite	1952	0.50e-1	4	0.3e-1	0.3e-1	60	60	NA	NA

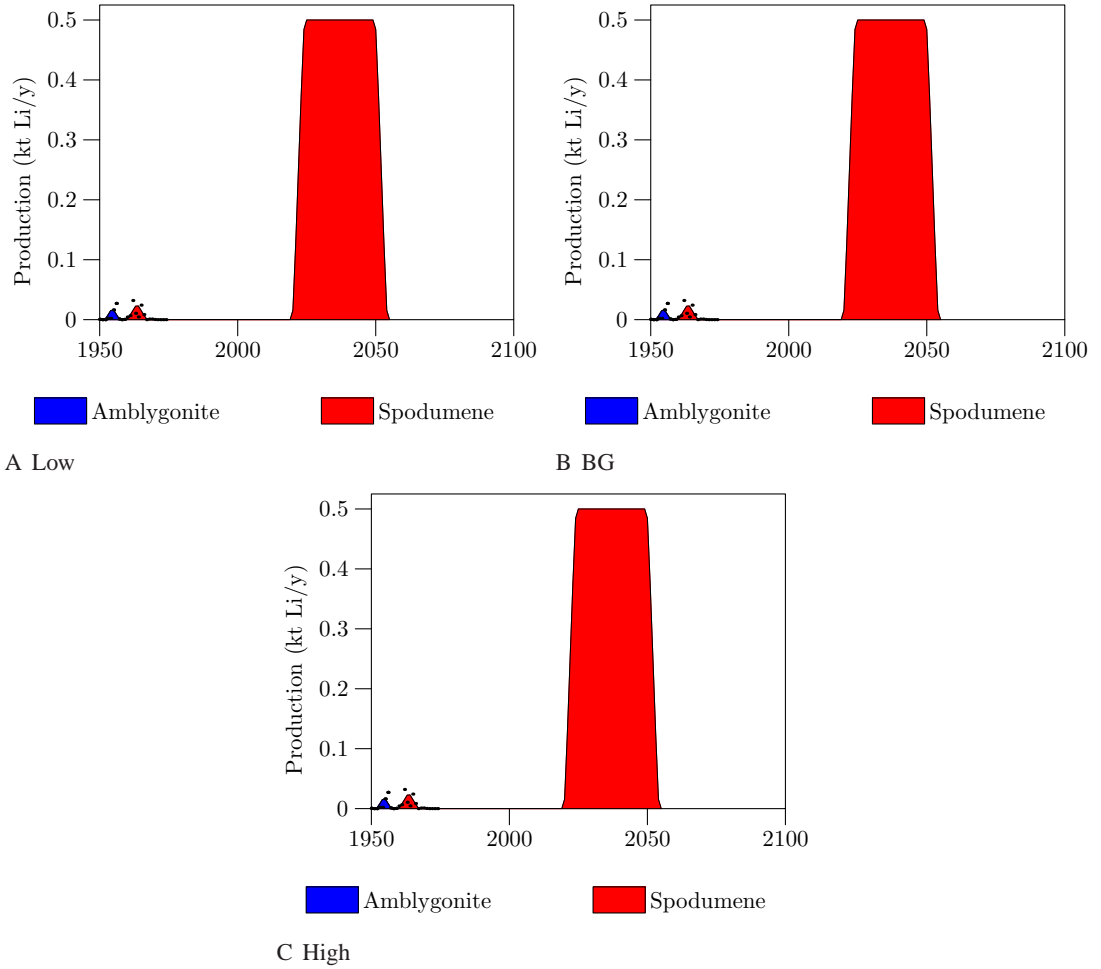


FIGURE 1.5. Scenarios for South Africa

TABLE 1.14. Peak years for South Africa

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite	1955	1955	1955	0.0	0.0	0.0
Spodumene	2037	2037	2037	0.5	0.5	0.5
Lithium	2037	2037	2037	0.5	0.5	0.5

TABLE 1.15. URR values for South Africa

Type	URR		
	Low	BG	High
Amblygonite	0.1	0.1	0.1
Spodumene	15.1	15.1	15.1
Lithium	15.1	15.1	15.1

1.1.6. Uganda.

TABLE 1.16. Mining constants for Uganda

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Amblygonite	1950	0.34e-1	4	0.5e-2	0.5e-2	60	60	NA	NA
BG Amblygonite	1950	0.34e-1	4	0.5e-2	0.5e-2	60	60	NA	NA
High Amblygonite	1950	0.34e-1	4	0.5e-2	0.5e-2	60	60	NA	NA

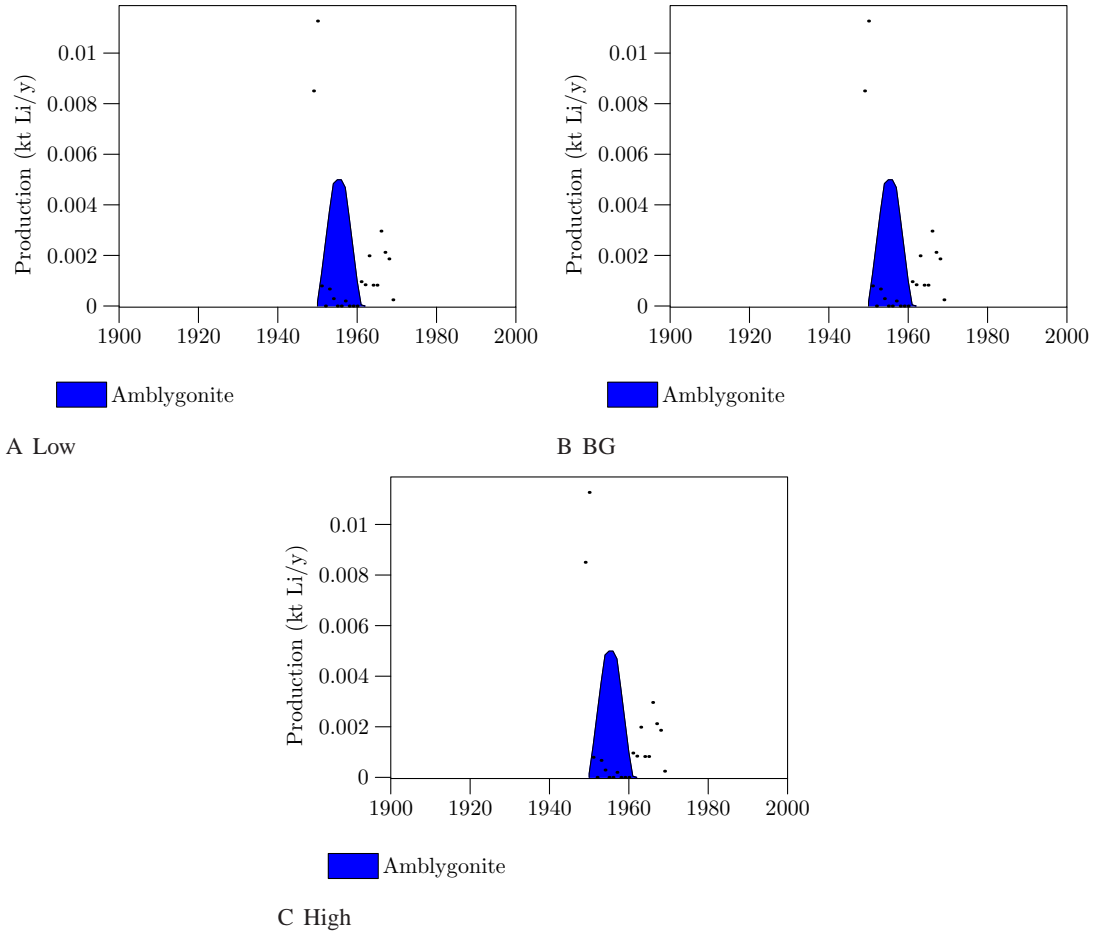


FIGURE 1.6. Scenarios for Uganda

TABLE 1.17. Peak years for Uganda

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite	1955	1955	1955	0.0	0.0	0.0
Lithium	1955	1955	1955	0.0	0.0	0.0

TABLE 1.18. URR values for Uganda

Type	URR		
	Low	BG	High
Amblygonite	-	-	-
Lithium	-	-	-

1.1.7. Zimbabwe.

TABLE 1.19. Mining constants for Zimbabwe

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Mineral Bikita	1953	69.805	1.5	0.8	0.8	80	80	NA	NA
BG Mineral Bikita	1953	69.805	1.5	0.8	0.8	80	80	NA	NA
High Mineral Bikita 1	1955	46.805	1.5	1	1	60	80	2070	0.37e-1
High Mineral Bikita 2	2008	57	1.5	0.8	0.8	80	80	NA	NA

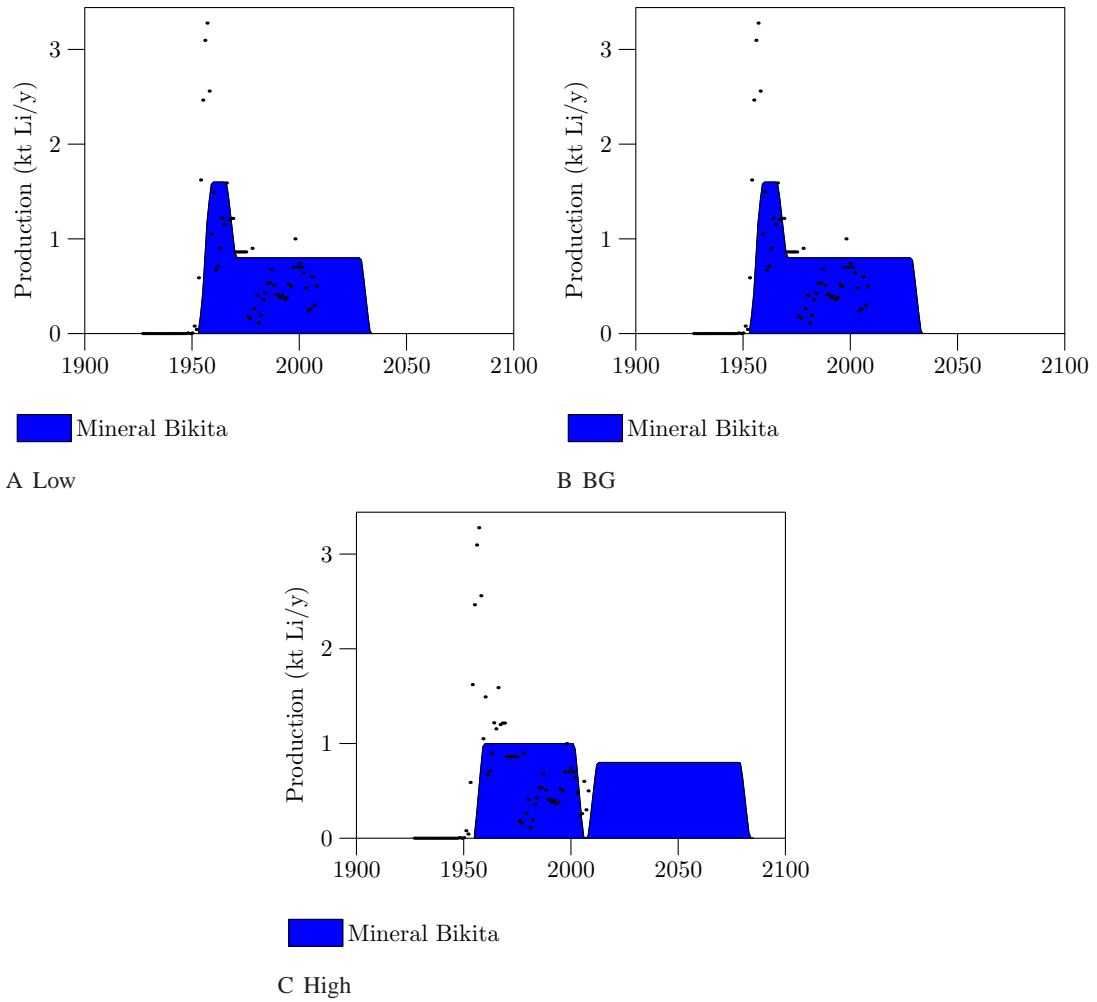


FIGURE 1.7. Scenarios for Zimbabwe

TABLE 1.20. Peak years for Zimbabwe

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Mineral Bikita	1962	1962	1980	1.6	1.6	1.0
Mineral Total	1962	1962	1980	1.6	1.6	1.0
Lithium	1962	1962	1980	1.6	1.6	1.0

TABLE 1.21. URR values for Zimbabwe

Type	URR		
	Low	BG	High
Mineral Bikita	69.8	69.8	103.8
Mineral Total	69.8	69.8	103.8
Lithium	69.8	69.8	103.8

1.1.8. Africa.

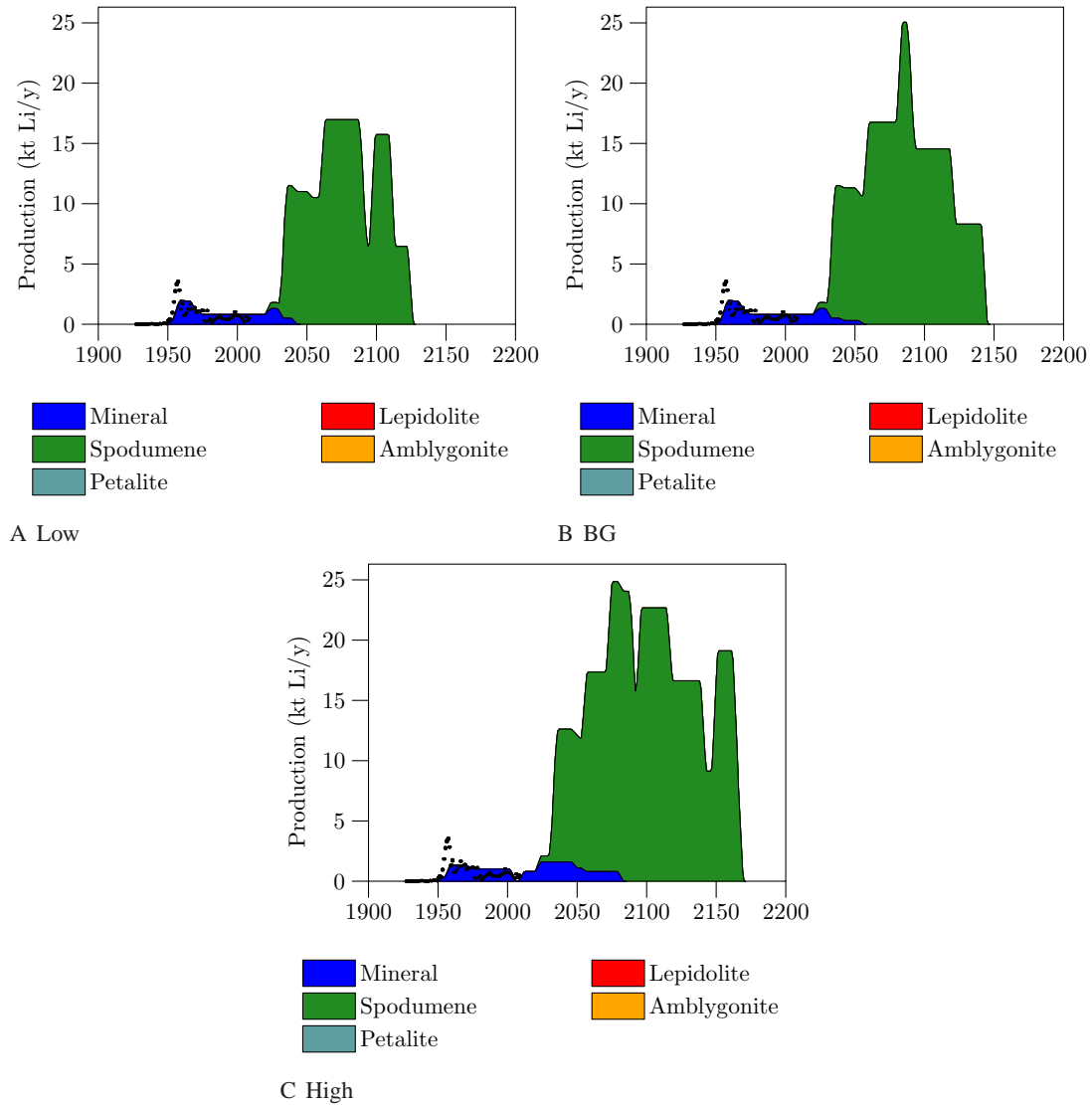


FIGURE 1.8. Scenarios for Africa

TABLE 1.22. Peak years for Africa

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite	1959	1959	1959	0.1	0.1	0.1
Lepidolite	1961	1961	1961	0.0	0.0	0.0
Mineral	1962	1962	2035	1.9	1.9	1.6
Petalite	1956	1956	1956	0.0	0.0	0.0
Spodumene	2075	2085	2081	17.0	25.1	24.1
Lithium	2075	2085	2077	17.0	25.1	24.9

TABLE 1.23. URR values for Africa

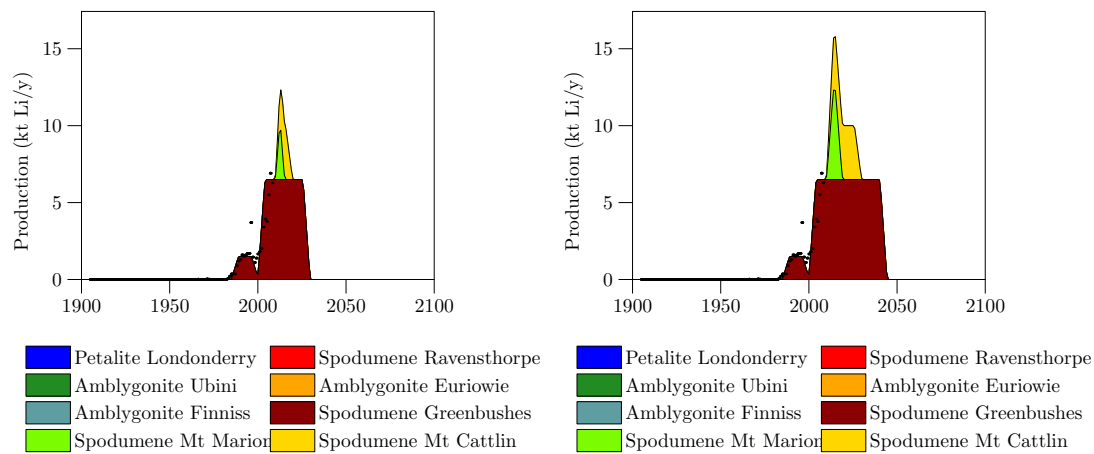
Type	URR		
	Low	BG	High
Amblygonite	1246.4	1605.5	2448.8
Lepidolite	85.7	89.7	133.0
Mineral	85.5	89.5	132.8
Petalite	1246.4	1605.5	2448.8
Spodumene	1245.8	1604.8	2448.1
Lithium	3909.7	4994.9	7611.4

1.2. Asia

1.2.1. Australia.

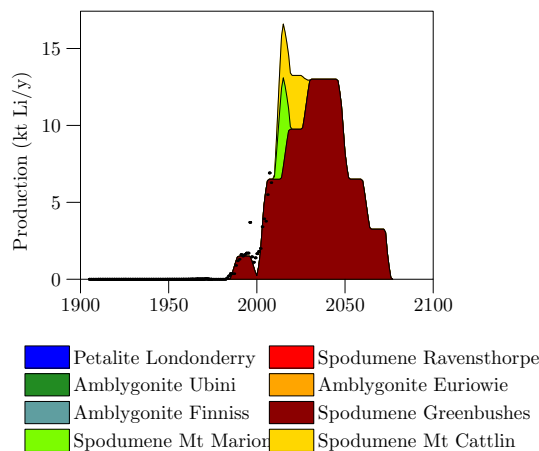
TABLE 1.24. Mining constants for Australia

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Spodumene Mt Cattlin	2010	20	4	3.5	3.5	20	20	NA	NA
Low Spodumene Mt Marion	2010	9.9	4	6	6	50	50	NA	NA
Low Spodumene Greenbushes 1	1985	17	4	1.5	1.5	50	50	NA	NA
Low Spodumene Greenbushes 2	2000	166.297	4	6.5	6.5	50	50	NA	NA
Low Amblygonite Finniss	1924	0.3e-2	4	0.6e-2	0.6e-2	50	50	NA	NA
Low Amblygonite Euriowie	1960	0.37e-2	4	0.4e-2	0.4e-2	50	50	NA	NA
Low Amblygonite Ubini	1910	0.13e-3	4	0.5e-2	0.5e-2	50	50	NA	NA
Low Spodumene Ravensthorpe	1961	0.33e-2	4	0.5e-2	0.5e-2	50	50	NA	NA
Low Petalite Londonderry	1963	0.113	4	0.2e-1	0.2e-1	50	50	NA	NA
BG Spodumene Mt Cattlin	2010	55.5	4	3.5	3.5	20	20	NA	NA
BG Spodumene Mt Marion	2010	29.77	4	6	6	50	50	NA	NA
BG Spodumene Greenbushes 1	1985	17	4	1.5	1.5	50	50	NA	NA
BG Spodumene Greenbushes 2	2000	261.797	4	6.5	6.5	50	50	NA	NA
BG Amblygonite Finniss	1924	0.3e-2	4	0.6e-2	0.6e-2	50	50	NA	NA
BG Amblygonite Euriowie	1960	0.37e-2	4	0.4e-2	0.4e-2	50	50	NA	NA
BG Amblygonite Ubini	1910	0.13e-3	4	0.5e-2	0.5e-2	50	50	NA	NA
BG Spodumene Ravensthorpe	1961	0.33e-2	4	0.5e-2	0.5e-2	50	50	NA	NA
BG Petalite Londonderry	1963	0.113	4	0.20e-1	0.20e-1	50	50	NA	NA
High Spodumene Mt Cattlin	2010	55.5	4	3.5	3.5	20	20	NA	NA
High Spodumene Mt Marion	2010	29.77	4	6	6	50	50	NA	NA
High Spodumene Greenbushes 1	1985	17	4	1.5	1.5	50	50	NA	NA
High Spodumene Greenbushes 2	2000	598.797	4	3.25	3.25	50	50	NA	NA
High Amblygonite Finniss	1924	0.3e-2	4	0.6e-2	0.6e-2	50	50	NA	NA
High Amblygonite Euriowie	1960	0.37e-2	4	0.4e-2	0.4e-2	50	50	NA	NA
High Amblygonite Ubini	1910	0.13e-3	4	0.5e-2	0.5e-2	50	50	NA	NA
High Spodumene Ravensthorpe	1961	0.33e-2	4	0.5e-2	0.5e-2	50	50	NA	NA
High Petalite Londonderry	1963	0.113	4	0.20e-1	0.20e-1	50	50	NA	NA



A Low

B BG



C High

FIGURE 1.9. Scenarios for Australia

TABLE 1.25. Peak years for Australia

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite Euriowie	1962	1962	1962	0.0	0.0	0.0
Amblygonite Finnis	1925	1925	1925	0.0	0.0	0.0
Amblygonite Ubini	1910	1910	1910	0.0	0.0	0.0
Amblygonite Total	1962	1962	1962	0.0	0.0	0.0
Petalite Londonderry	1968	1968	1968	0.0	0.0	0.0
Petalite Total	1968	1968	1968	0.0	0.0	0.0
Spodumene Greenbushes	2015	2022	2038	6.5	6.5	13.0
Spodumene Mt Cattlin	2015	2020	2020	3.5	3.5	3.5
Spodumene Mt Marion	2013	2014	2014	3.2	5.8	5.8
Spodumene Ravensthorpe	1963	1963	1963	0.0	0.0	0.0
Spodumene Total	2013	2015	2015	12.3	15.8	16.6
Lithium	2013	2015	2015	12.3	15.8	16.6

TABLE 1.26. URR values for Australia

Type	URR		
	Low	BG	High
Amblygonite Euriowie	-	-	-
Amblygonite Finniss	-	-	-
Amblygonite Ubini	-	-	-
Amblygonite Total	-	-	-
Petalite Londonderry	0.1	0.1	0.1
Petalite Total	0.1	0.1	0.1
Spodumene Greenbushes	183.3	278.8	615.8
Spodumene Mt Cattlin	20.0	55.5	55.5
Spodumene Mt Marion	9.9	29.8	29.8
Spodumene Ravensthorpe	-	-	-
Spodumene Total	213.2	364.1	701.1
Lithium	213.3	364.2	701.2

1.2.2. China.

TABLE 1.27. Mining constants for China

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Unknown	1984	2558.396	2	1.4	1.4	70	70	NA	NA
BG Unknown	1984	2966.096	2	1.4	1.4	70	70	NA	NA
High Unknown	1984	6231.396	1.5	1.4	1.4	70	70	NA	NA

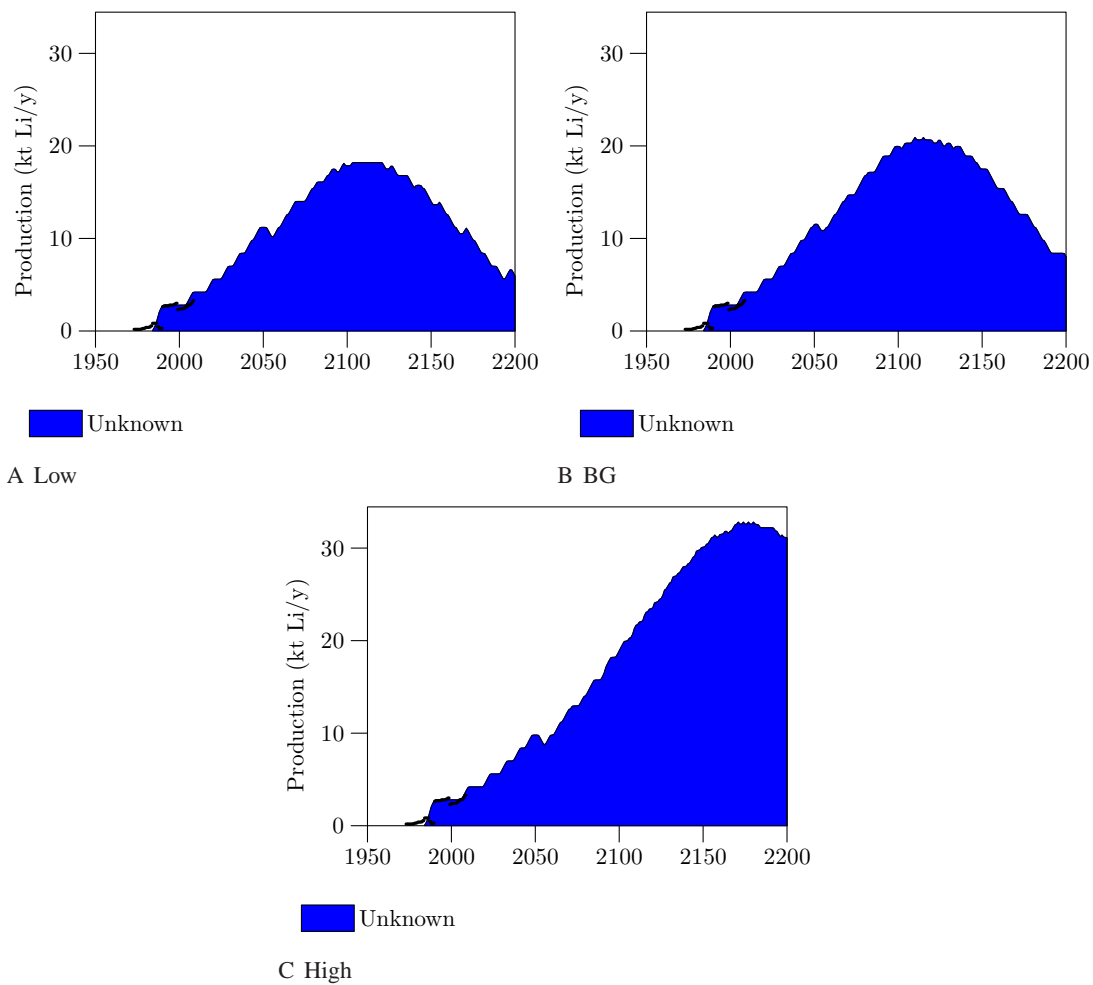


FIGURE 1.10. Scenarios for China

TABLE 1.28. Peak years for China

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Unknown	2112	2112	2175	18.2	20.9	32.8
Lithium	2112	2112	2175	18.2	20.9	32.8

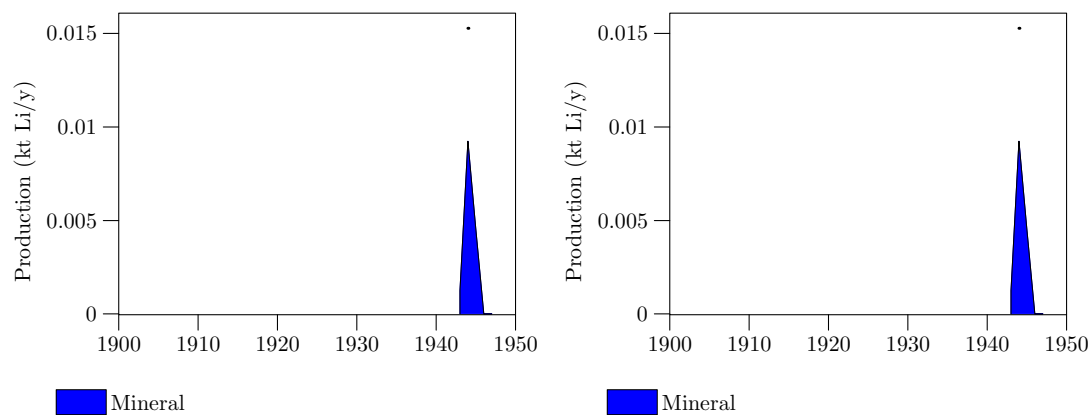
TABLE 1.29. URR values for China

Type	URR		
	Low	BG	High
Unknown	2558.4	2966.1	6231.4
Lithium	2558.4	2966.1	6231.4

1.2.3. Korea.

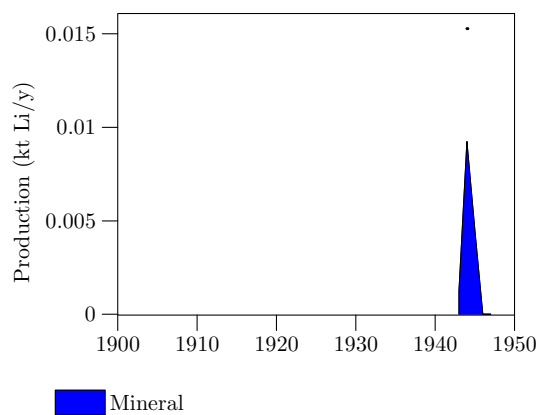
TABLE 1.30. Mining constants for Korea

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Mineral	1943	0.15e-1	4	0.4e-1	0.4e-1	60	60	NA	NA
BG Mineral	1943	0.15e-1	4	0.4e-1	0.4e-1	60	60	NA	NA
High Mineral	1943	0.15e-1	4	0.4e-1	0.4e-1	60	60	NA	NA



A Low

B BG



C High

FIGURE 1.11. Scenarios for Korea

TABLE 1.31. Peak years for Korea

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Mineral	1944	1944	1944	0.0	0.0	0.0
Lithium	1944	1944	1944	0.0	0.0	0.0

TABLE 1.32. URR values for Korea

Type	URR		
	Low	BG	High
Mineral	-	-	-
Lithium	-	-	-

1.2.4. Asia.

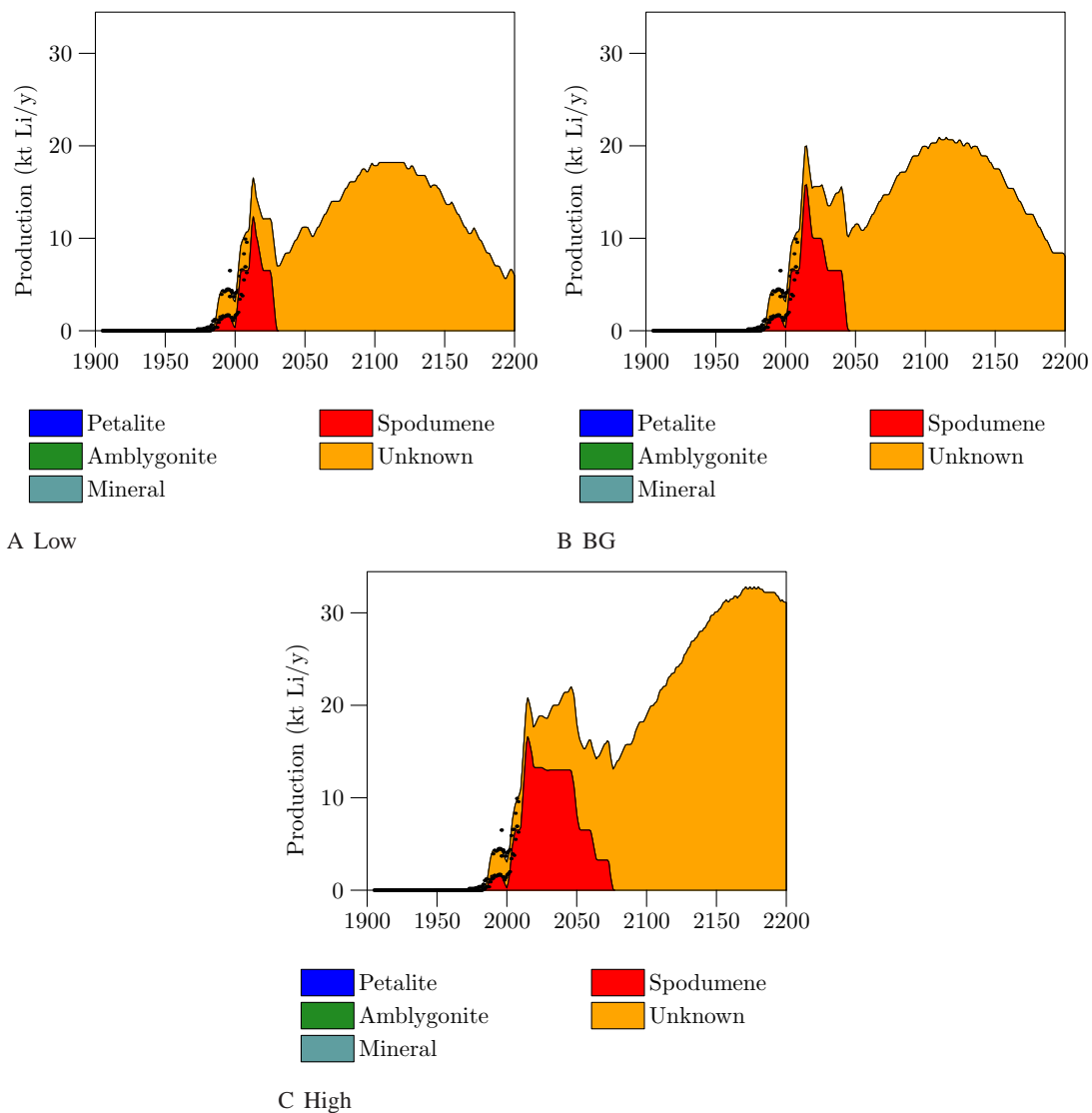


FIGURE 1.12. Scenarios for Asia

TABLE 1.33. Peak years for Asia

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite	1962	1962	1962	0.0	0.0	0.0
Mineral	1944	1944	1944	0.0	0.0	0.0
Petalite	1968	1968	1968	0.0	0.0	0.0
Spodumene	2013	2015	2015	12.3	15.8	16.6
Unknown	2112	2112	2175	18.2	20.9	32.8
Lithium	2112	2112	2175	18.2	20.9	32.8

TABLE 1.34. URR values for Asia

Type	URR		
	Low	BG	High
Amblygonite	213.3	364.2	701.2
Mineral	2771.7	3330.3	6932.6
Petalite	0.1	0.1	0.1
Spodumene	213.3	364.2	701.2
Unknown	2771.7	3330.3	6932.6
Lithium	5970.2	7389.1	15267.7

1.3. Europe

1.3.1. Austria.

TABLE 1.35. Mining constants for Austria

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Spodumene Koralpe	2020	10	4	0.5	0.5	35	35	NA	NA
BG Spodumene Koralpe	2020	10	4	0.5	0.5	35	35	NA	NA
High Spodumene Koralpe	2020	113	4	5	5	35	35	NA	NA

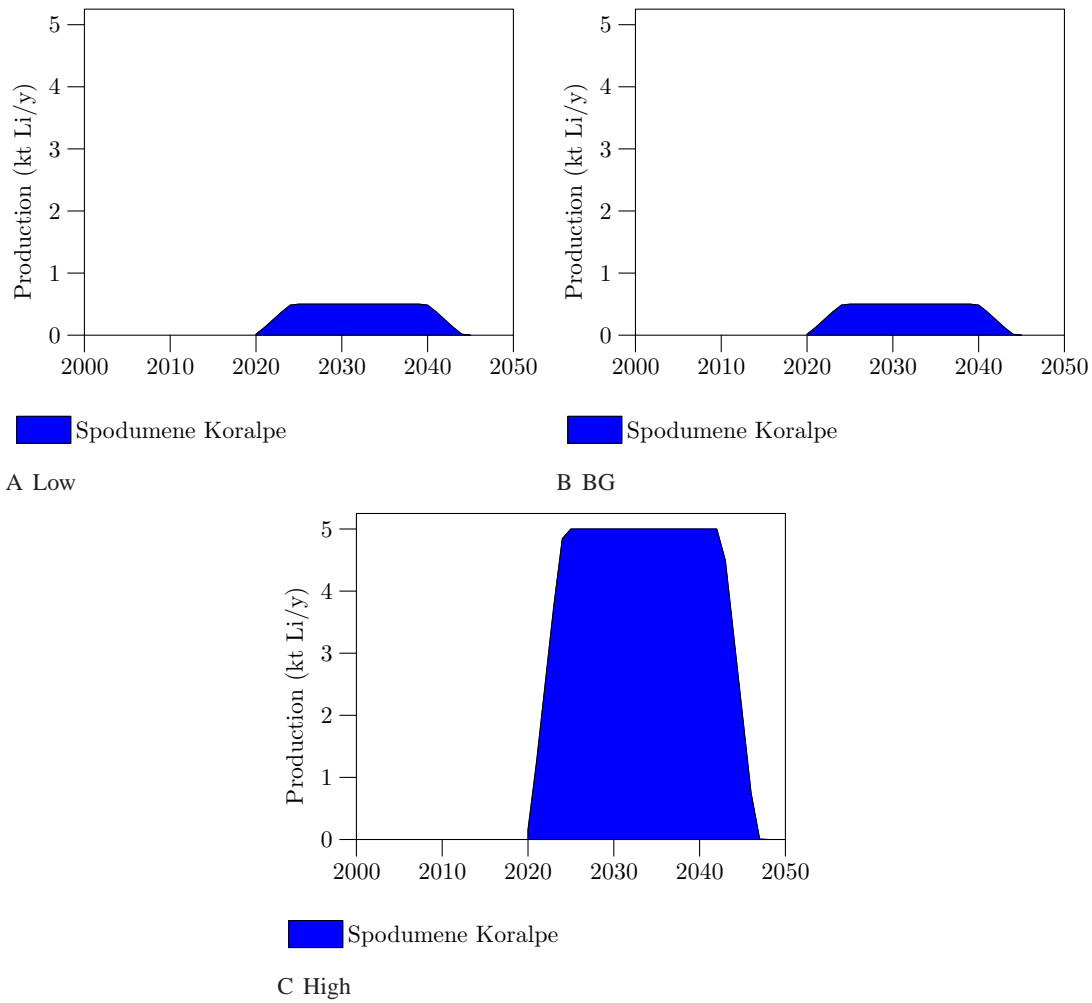


FIGURE 1.13. Scenarios for Austria

TABLE 1.36. Peak years for Austria

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Spodumene Koralpe	2032	2032	2033	0.5	0.5	5.0
Spodumene Total	2032	2032	2033	0.5	0.5	5.0
Lithium	2032	2032	2033	0.5	0.5	5.0

TABLE 1.37. URR values for Austria

Type	URR		
	Low	BG	High
Spodumene Koralpe	10.0	10.0	113.0
Spodumene Total	10.0	10.0	113.0
Lithium	10.0	10.0	113.0

1.3.2. Czechoslovakia.

TABLE 1.38. Mining constants for Czechoslovakia

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Mineral	1925	0.28e-2	2	0.5e-2	0.5e-2	70	70	NA	NA
BG Mineral	1925	0.28e-2	2	0.5e-2	0.5e-2	70	70	NA	NA
High Mineral	1925	0.28e-2	2	0.5e-2	0.5e-2	70	70	NA	NA

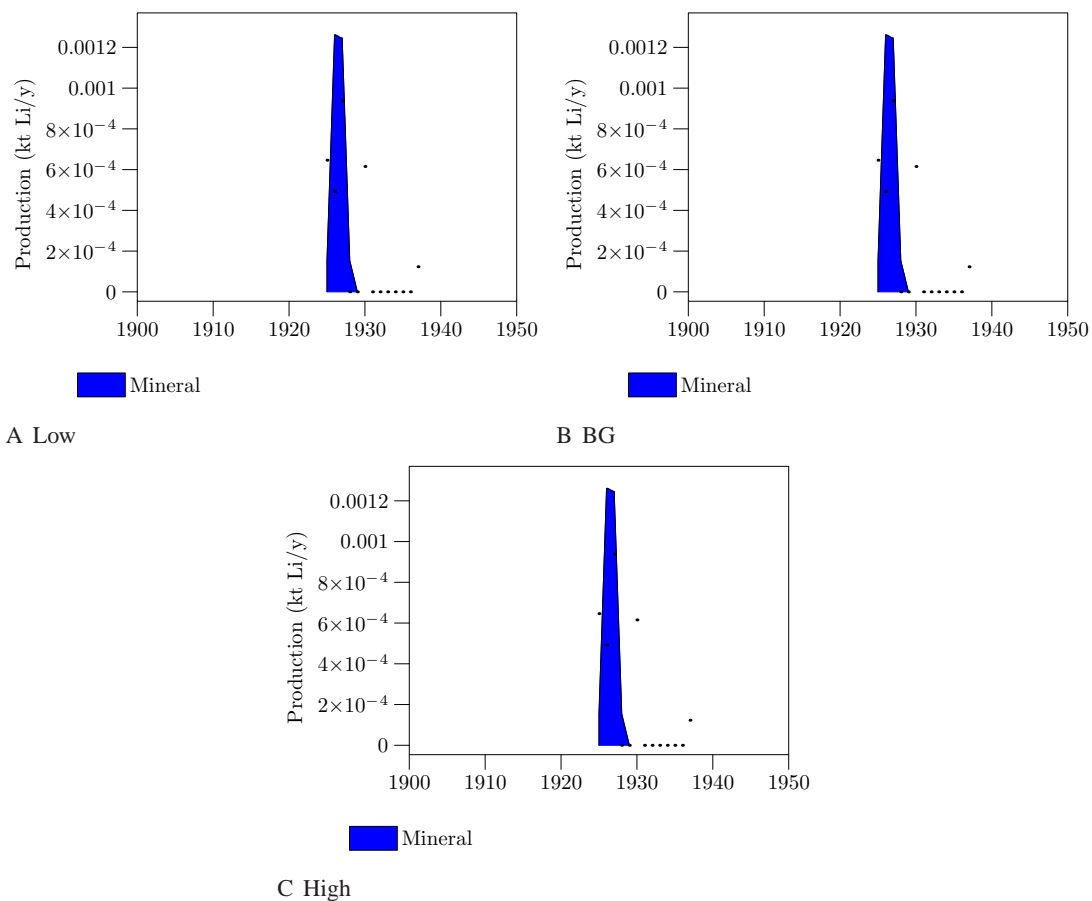


FIGURE 1.14. Scenarios for Czechoslovakia

TABLE 1.39. Peak years for Czechoslovakia

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Mineral	1926	1926	1926	0.0	0.0	0.0
Lithium	1926	1926	1926	0.0	0.0	0.0

TABLE 1.40. URR values for Czechoslovakia

Type	URR		
	Low	BG	High
Mineral	-	-	-
Lithium	-	-	-

1.3.3. Finland.

TABLE 1.41. Mining constants for Finland

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Mineral	2010	6.4	4	0.1	0.1	30	30	NA	NA
BG Mineral	2010	15	4	0.15	0.15	50	50	NA	NA
High Mineral	2010	15	4	0.15	0.15	50	50	NA	NA

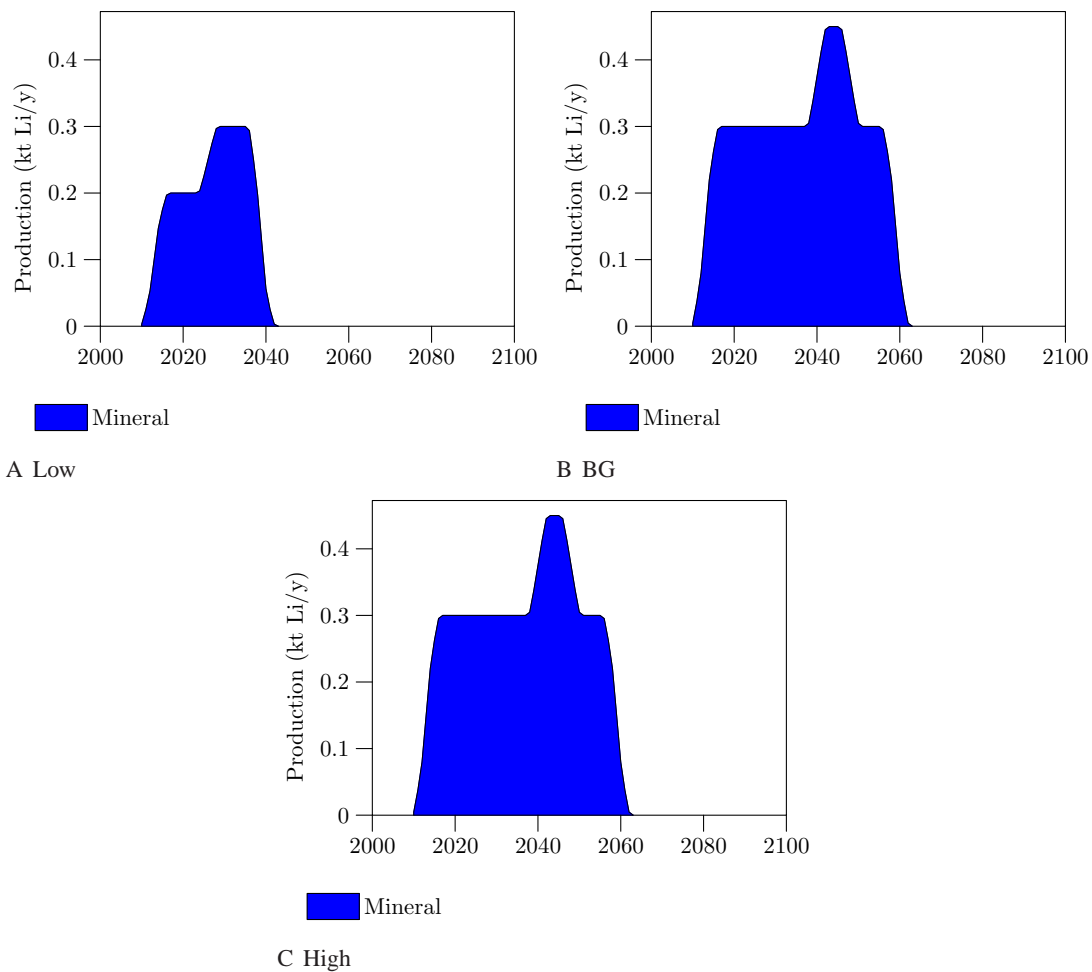


FIGURE 1.15. Scenarios for Finland

TABLE 1.42. Peak years for Finland

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Mineral	2032	2044	2044	0.3	0.5	0.5
Lithium	2032	2044	2044	0.3	0.5	0.5

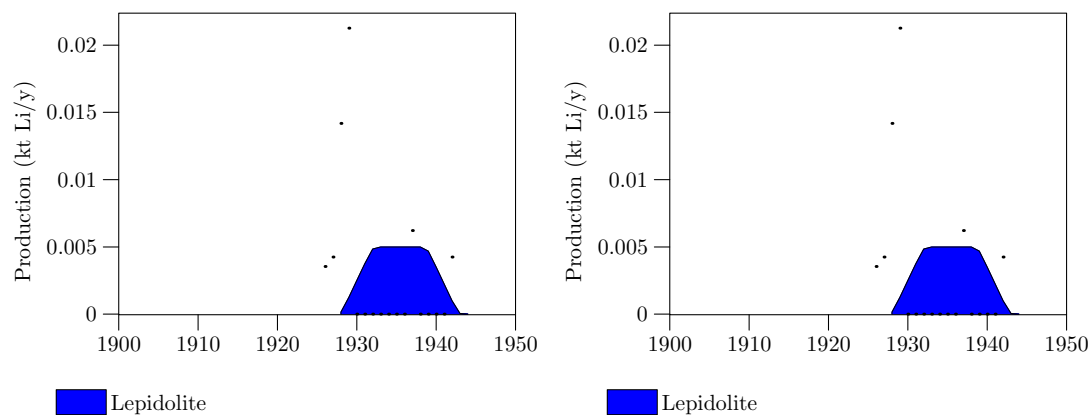
TABLE 1.43. URR values for Finland

Type	URR		
	Low	BG	High
Mineral	6.4	15.0	15.0
Lithium	6.4	15.0	15.0

1.3.4. France.

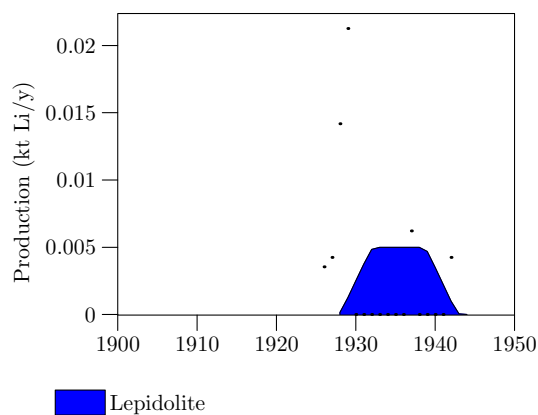
TABLE 1.44. Mining constants for France

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Lepidolite	1928	0.54e-1	4	0.5e-2	0.5e-2	15	15	NA	NA
BG Lepidolite	1928	0.54e-1	4	0.5e-2	0.5e-2	15	15	NA	NA
High Lepidolite	1928	0.54e-1	4	0.5e-2	0.5e-2	15	15	NA	NA



A Low

B BG



C High

FIGURE 1.16. Scenarios for France

TABLE 1.45. Peak years for France

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Lepidolite	1935	1935	1935	0.0	0.0	0.0
Lithium	1935	1935	1935	0.0	0.0	0.0

TABLE 1.46. URR values for France

Type	URR		
	Low	BG	High
Lepidolite	0.1	0.1	0.1
Lithium	0.1	0.1	0.1

1.3.5. Germany.

TABLE 1.47. Mining constants for Germany

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Mineral	1925	0.72e-1	4	0.2e-1	0.2e-1	60	60	NA	NA
BG Mineral	1925	0.72e-1	4	0.2e-1	0.2e-1	60	60	NA	NA
High Mineral	1925	0.72e-1	4	0.2e-1	0.2e-1	60	60	NA	NA

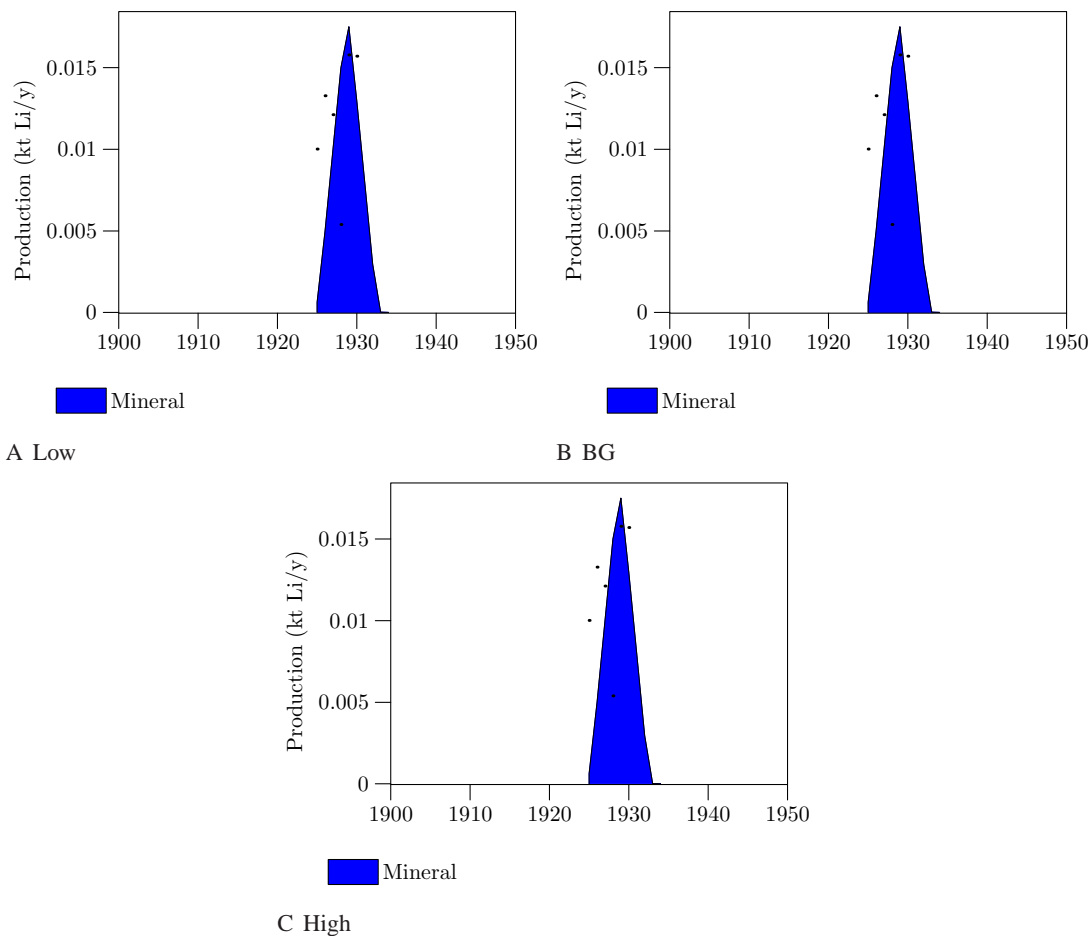


FIGURE 1.17. Scenarios for Germany

TABLE 1.48. Peak years for Germany

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Mineral	1929	1929	1929	0.0	0.0	0.0
Lithium	1929	1929	1929	0.0	0.0	0.0

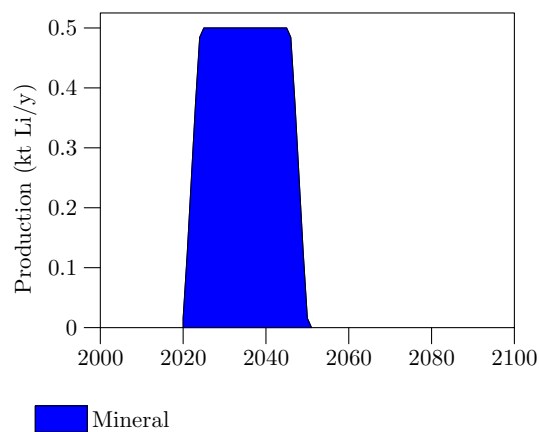
TABLE 1.49. URR values for Germany

Type	URR		
	Low	BG	High
Mineral	0.1	0.1	0.1
Lithium	0.1	0.1	0.1

1.3.6. Ireland.

TABLE 1.50. Mining constants for Ireland

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
High Mineral	2020	13	4	0.5	0.5	60	60	NA	NA



A High

FIGURE 1.18. Scenarios for Ireland

TABLE 1.51. Peak years for Ireland

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Mineral			2035			0.5
Lithium			2035			0.5

TABLE 1.52. URR values for Ireland

Type	URR		
	Low	BG	High
Mineral			13.0
Lithium	-	-	13.0

1.3.7. Portugal.

TABLE 1.53. Mining constants for Portugal

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Mineral	1988	10.738	6	0.1	0.1	20	20	NA	NA
Low Lithiophilite	1951	0.1e-2	4	0.3e-2	0.3e-2	60	60	NA	NA
Low Amblygonite	1925	0.31e-1	4	0.3e-2	0.3e-2	60	60	NA	NA
BG Mineral	1991	15.738	6	0.1	0.1	20	20	NA	NA
BG Lithiophilite	1951	0.1e-2	4	0.3e-2	0.3e-2	60	60	NA	NA
BG Amblygonite	1925	0.31e-1	4	0.3e-2	0.3e-2	60	60	NA	NA
High Mineral	1991	15.738	6	0.1	0.1	20	20	NA	NA
High Lithiophilite	1951	0.1e-2	4	0.3e-2	0.3e-2	60	60	NA	NA
High Amblygonite	1925	0.31e-1	4	0.3e-2	0.3e-2	60	60	NA	NA

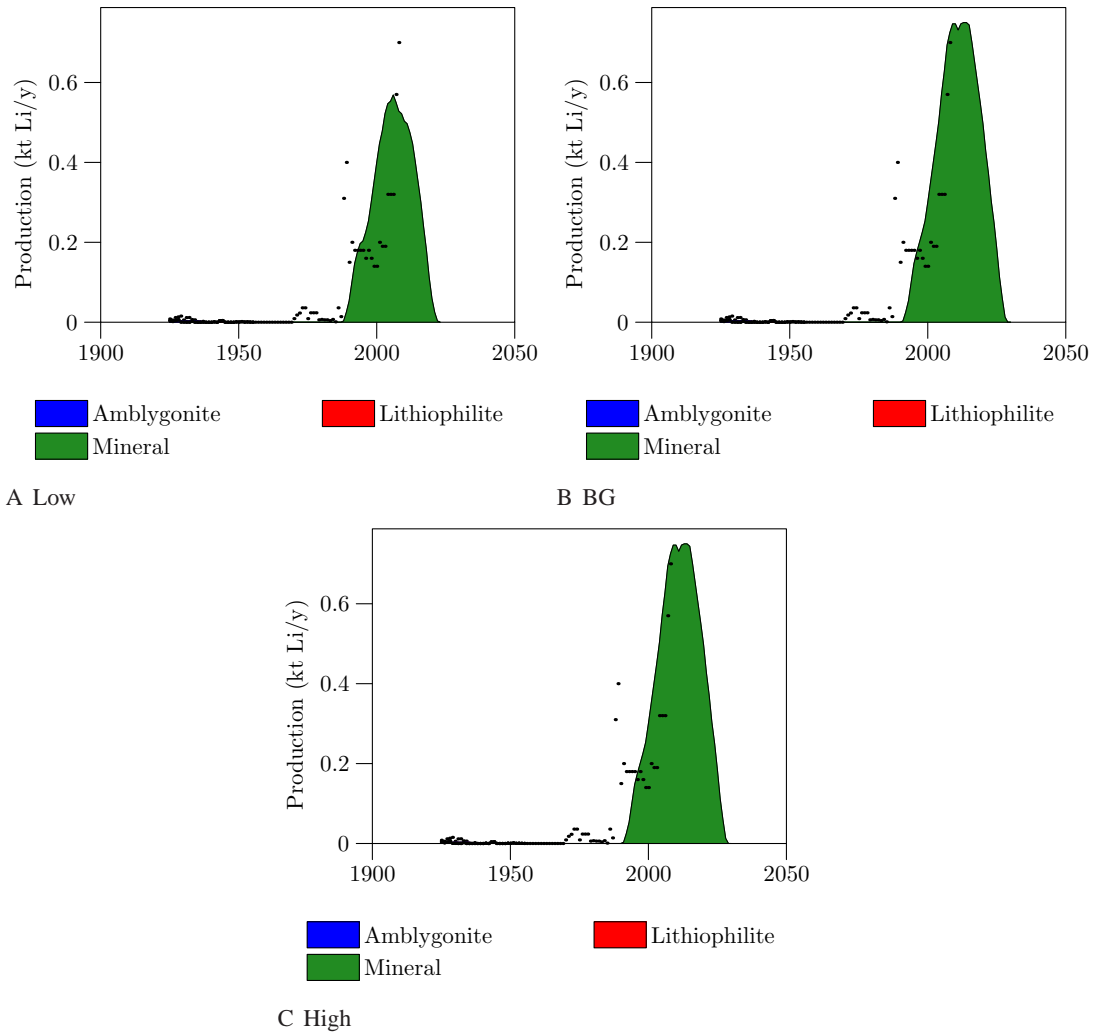


FIGURE 1.19. Scenarios for Portugal

TABLE 1.54. Peak years for Portugal

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite	1932	1932	1932	0.0	0.0	0.0
Lithiophilite	1952	1952	1952	0.0	0.0	0.0
Mineral	2006	2013	2013	0.6	0.8	0.8
Lithium	2006	2013	2013	0.6	0.8	0.8

TABLE 1.55. URR values for Portugal

Type	URR		
	Low	BG	High
Amblygonite	-	-	-
Lithiophilite	-	-	-
Mineral	10.7	15.7	15.7
Lithium	10.8	15.8	15.8

1.3.8. Serbia.

TABLE 1.56. Mining constants for Serbia

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Jadarite	2020	425	4	8.37	8.37	60	60	NA	NA
BG Jadarite	2020	425	4	8.37	8.37	60	60	NA	NA
High Jadarite	2020	990	4	8.37	8.37	125	125	NA	NA

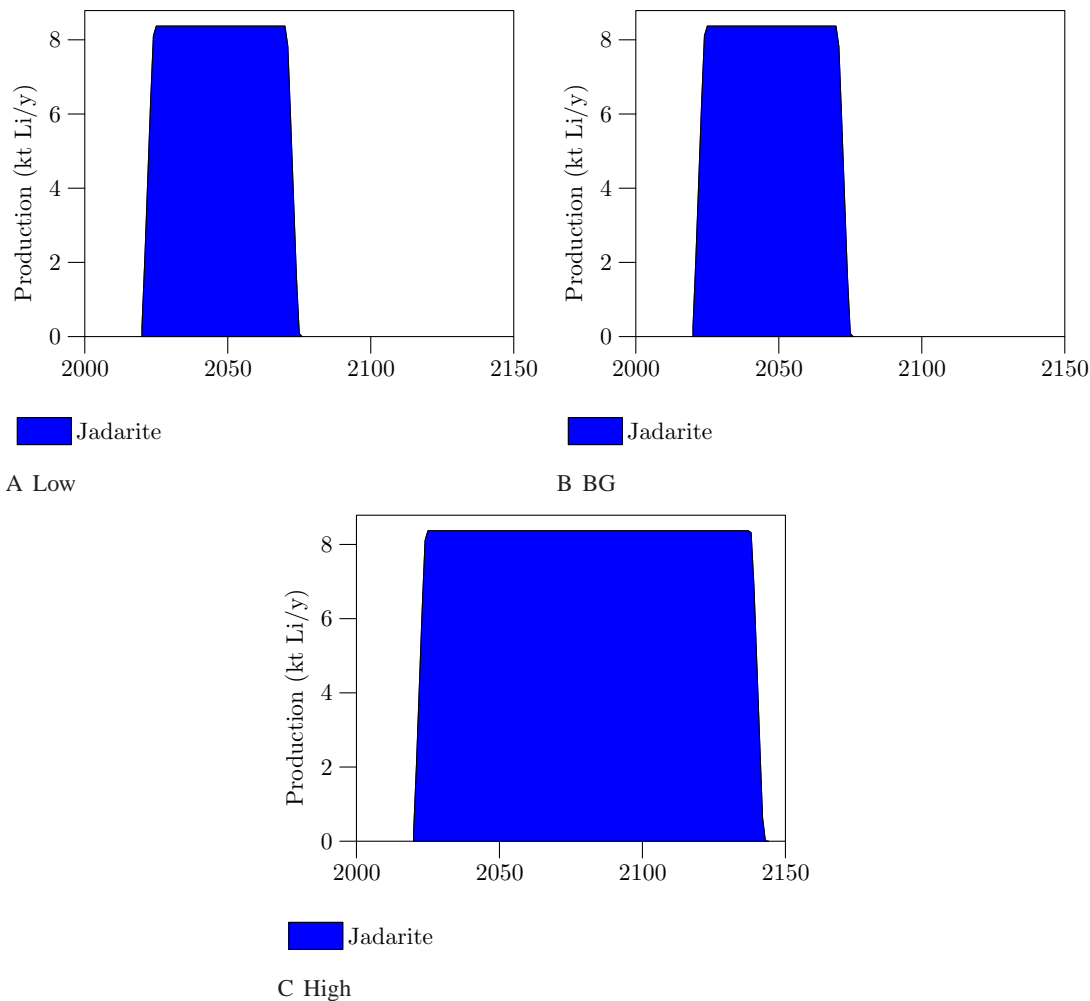


FIGURE 1.20. Scenarios for Serbia

TABLE 1.57. Peak years for Serbia

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Jadarite	2047	2047	2081	8.4	8.4	8.4
Lithium	2047	2047	2081	8.4	8.4	8.4

TABLE 1.58. URR values for Serbia

Type	URR		
	Low	BG	High
Jadarite	425.0	425.0	990.0
Lithium	425.0	425.0	990.0

1.3.9. Spain.

TABLE 1.59. Mining constants for Spain

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Lepidolite	2002	0.69	4	0.12	0.12	60	60	NA	NA
Low Amblygonite	1944	0.42e-1	4	0.15e-1	0.15e-1	60	60	NA	NA
BG Lepidolite	2002	0.69	4	0.12	0.12	60	60	NA	NA
BG Amblygonite	1944	0.42e-1	4	0.15e-1	0.15e-1	60	60	NA	NA
High Lepidolite	2002	72.69	4	0.6e-1	0.6e-1	50	50	NA	NA
High Amblygonite	1944	0.42e-1	4	0.15e-1	0.15e-1	60	60	NA	NA

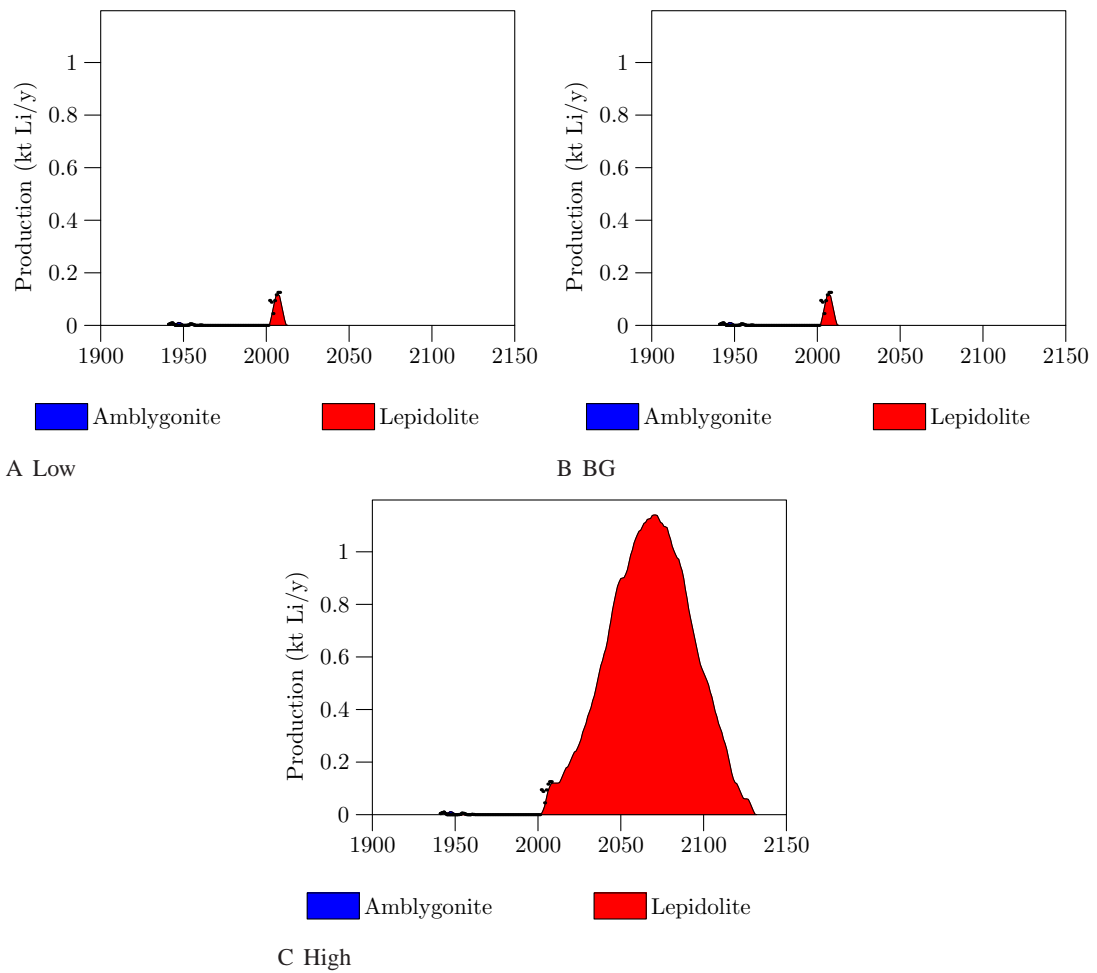


FIGURE 1.21. Scenarios for Spain

TABLE 1.60. Peak years for Spain

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite	1947	1947	1947	0.0	0.0	0.0
Lepidolite	2007	2007	2070	0.1	0.1	1.1
Lithium	2007	2007	2070	0.1	0.1	1.1

TABLE 1.61. URR values for Spain

Type	URR		
	Low	BG	High
Amblygonite	-	-	-
Lepidolite	0.7	0.7	72.7
Lithium	0.7	0.7	72.7

1.3.10. Sweden.

TABLE 1.62. Mining constants for Sweden

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Spodumene	1938	0.26e-1	4	0.5e-2	0.5e-2	60	60	NA	NA
Low Petalite	1938	0.18e-1	4	0.5e-2	0.5e-2	60	60	NA	NA
BG Spodumene	1938	0.26e-1	4	0.5e-2	0.5e-2	60	60	NA	NA
BG Petalite	1938	0.18e-1	4	0.5e-2	0.5e-2	60	60	NA	NA
High Spodumene	1938	0.26e-1	4	0.5e-2	0.5e-2	60	60	NA	NA
High Petalite	1938	0.18e-1	4	0.5e-2	0.5e-2	60	60	NA	NA

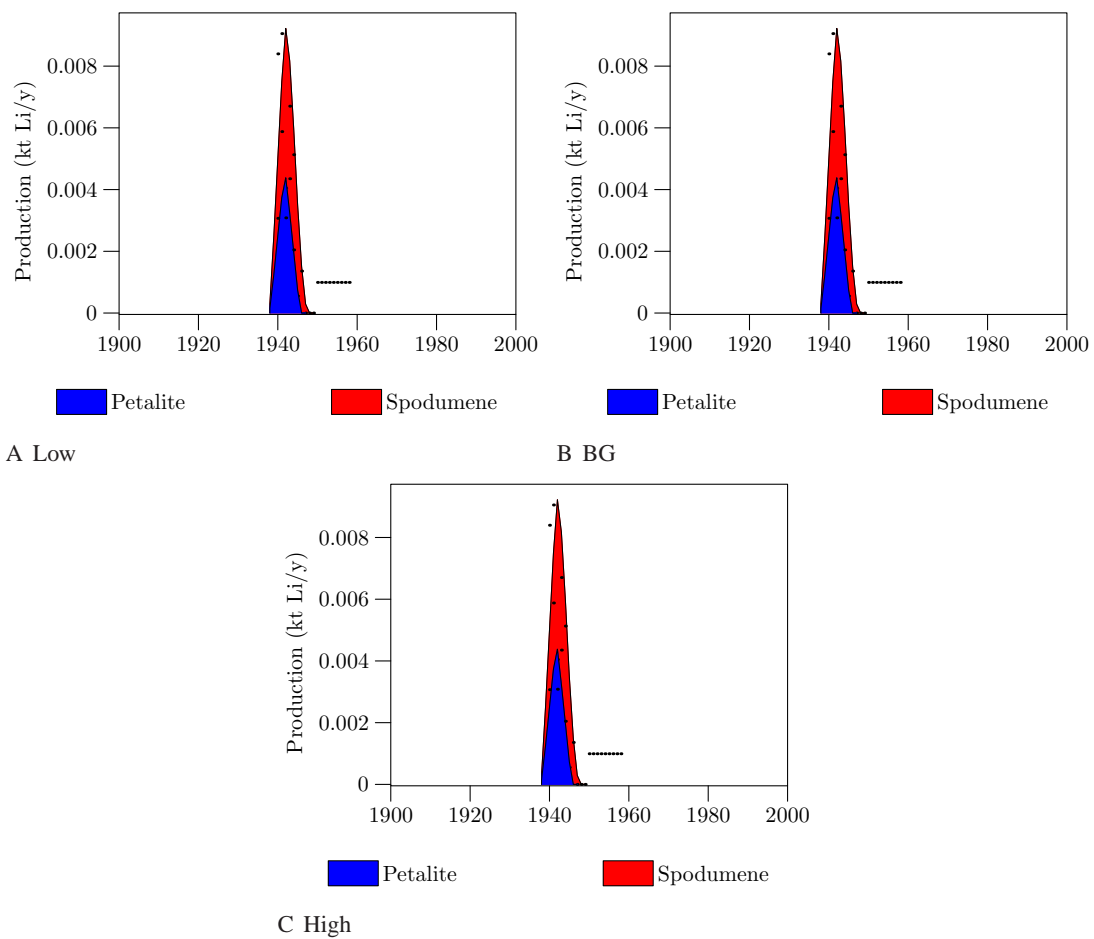


FIGURE 1.22. Scenarios for Sweden

TABLE 1.63. Peak years for Sweden

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Petalite	1942	1942	1942	0.0	0.0	0.0
Spodumene	1943	1943	1943	0.0	0.0	0.0
Lithium	1942	1942	1942	0.0	0.0	0.0

TABLE 1.64. URR values for Sweden

Type	URR		
	Low	BG	High
Petalite	-	-	-
Spodumene	-	-	-
Lithium	-	-	-

1.3.11. Europe.

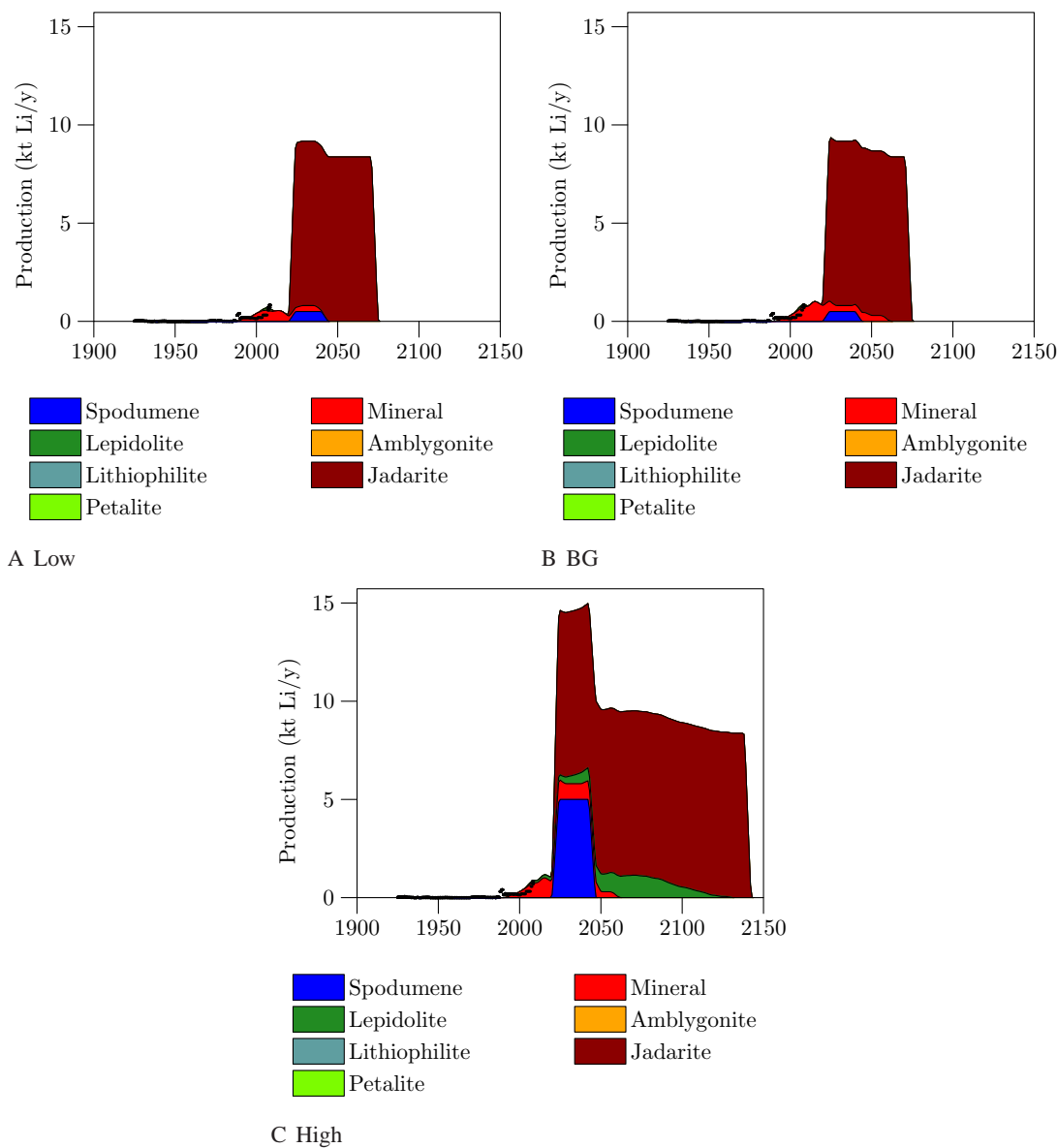


FIGURE 1.23. Scenarios for Europe

TABLE 1.65. Peak years for Europe

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite	1947	1947	1947	0.0	0.0	0.0
Jadarite	2047	2047	2081	8.4	8.4	8.4
Lepidolite	2007	2007	2070	0.1	0.1	1.1
Lithiophilite	1952	1952	1952	0.0	0.0	0.0
Mineral	2006	2015	2024	0.6	1.0	1.0
Petalite	1942	1942	1942	0.0	0.0	0.0
Spodumene	2032	2032	2033	0.5	0.5	5.0
Lithium	2032	2025	2042	9.2	9.4	15.0

TABLE 1.66. URR values for Europe

Type	URR		
	Low	BG	High
Amblygonite	28.1	41.7	229.7
Jadarite	453.1	466.7	1219.7
Lepidolite	28.0	41.6	229.6
Lithiophilite	28.1	41.7	229.7
Mineral	27.2	40.8	156.8
Petalite	453.1	466.7	1219.7
Spodumene	10.0	10.0	113.0
Lithium	1027.5	1109.1	3398.1

1.4. FSU

1.4.1. FSU.

TABLE 1.67. Mining constants for FSU

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Mineral 1	1975	49.775	4	2	2	60	60	NA	NA
Low Mineral 2	2015	130	4	2	2	70	70	NA	NA
BG Mineral 1	1975	49.775	4	2	2	60	60	NA	NA
BG Mineral 2	2015	130	4	2	2	70	70	NA	NA
High Mineral 1	1975	49.775	4	2	2	60	60	NA	NA
High Mineral 2	2015	2480	4	2	2	60	60	NA	NA

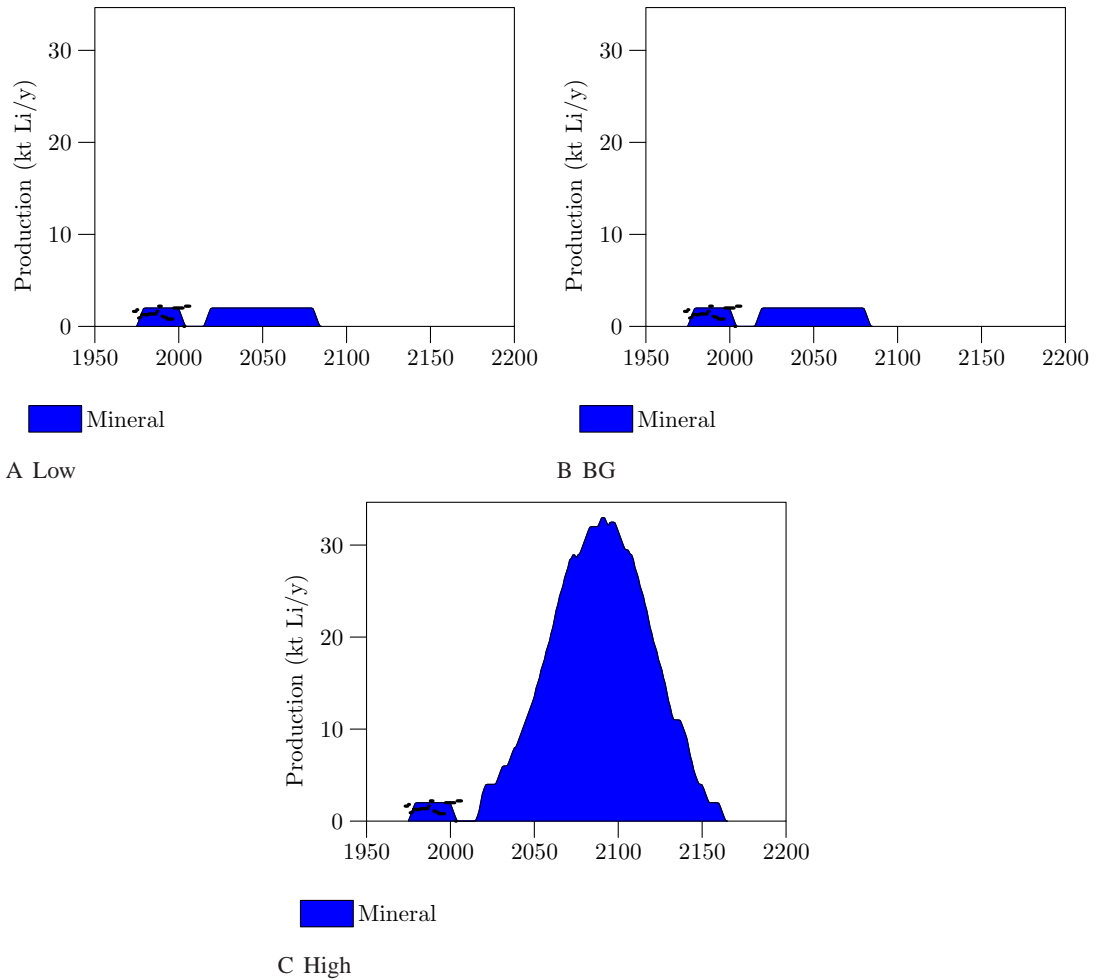


FIGURE 1.24. Scenarios for FSU

TABLE 1.68. Peak years for FSU

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Mineral	2029	2029	2091	2.0	2.0	33.0
Lithium	2029	2029	2091	2.0	2.0	33.0

TABLE 1.69. URR values for FSU

Type	URR		
	Low	BG	High
Mineral	179.8	179.8	2529.8
Lithium	179.8	179.8	2529.8

1.4.2. FSU.

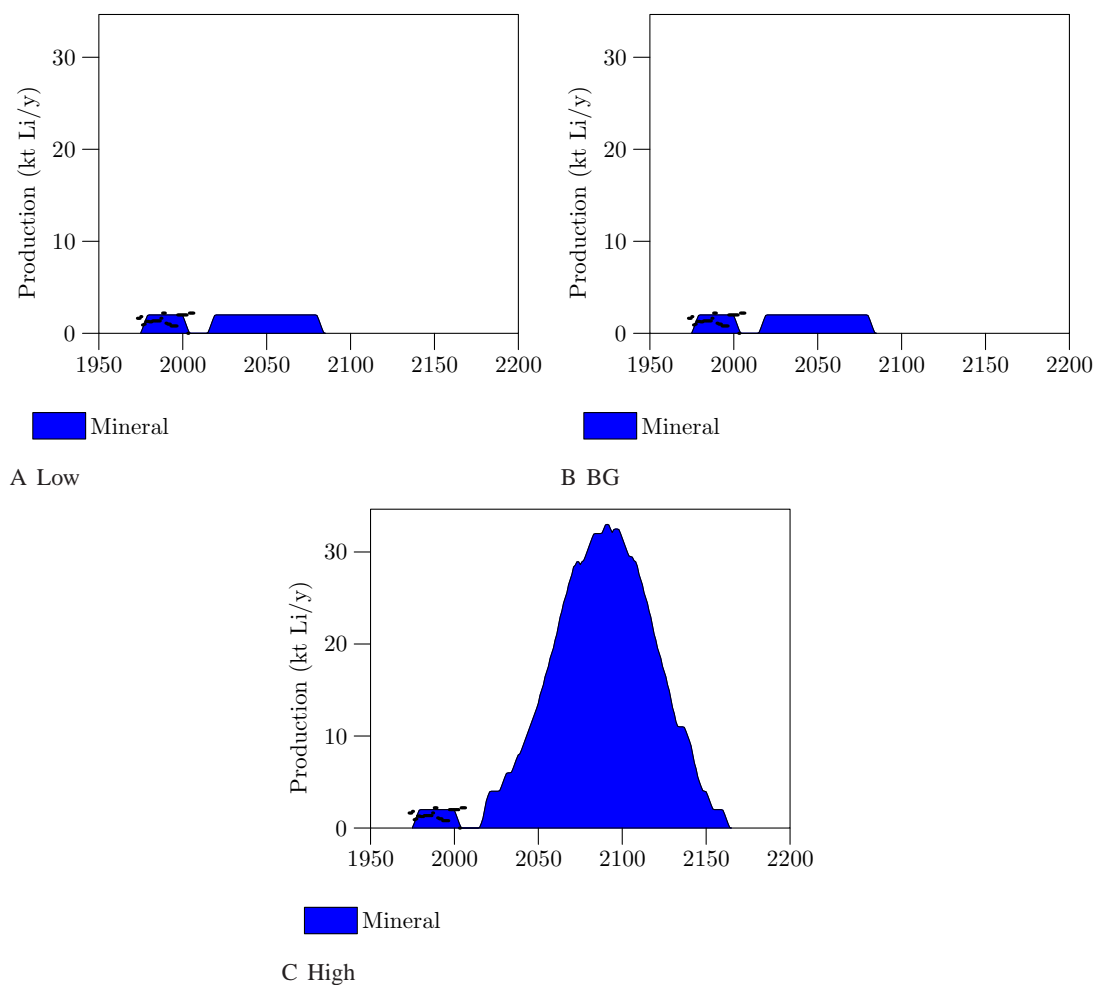


FIGURE 1.25. Scenarios for FSU

TABLE 1.70. Peak years for FSU

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Mineral	2029	2029	2091	2.0	2.0	33.0
Lithium	2029	2029	2091	2.0	2.0	33.0

TABLE 1.71. URR values for FSU

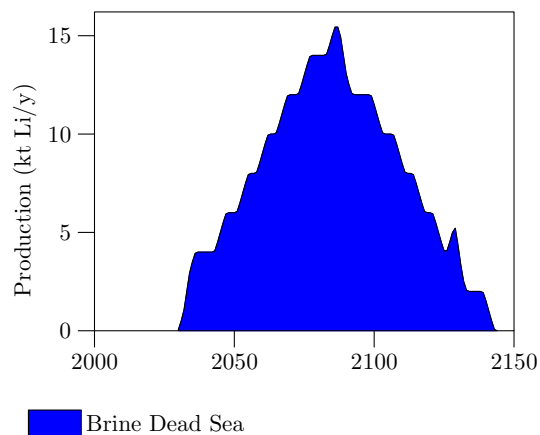
Type	URR		
	Low	BG	High
Mineral	179.8	179.8	2529.8
Lithium	179.8	179.8	2529.8

1.5. Middle East

1.5.1. Israel.

TABLE 1.72. Mining constants for Israel

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
High Brine Dead Sea	2030	900	4	2	2	60	60	NA	NA



A High

FIGURE 1.26. Scenarios for Israel

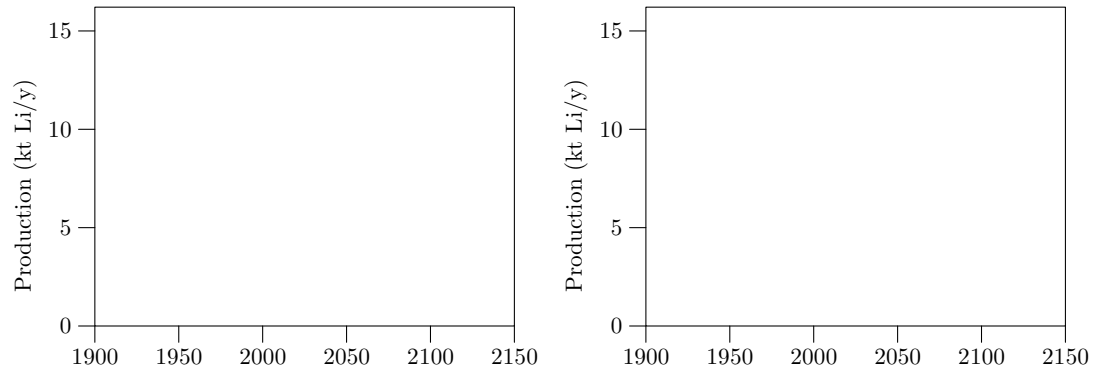
TABLE 1.73. Peak years for Israel

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Brine Dead Sea			2086			15.4
Brine Total			2086			15.4
Lithium			2086			15.4

TABLE 1.74. URR values for Israel

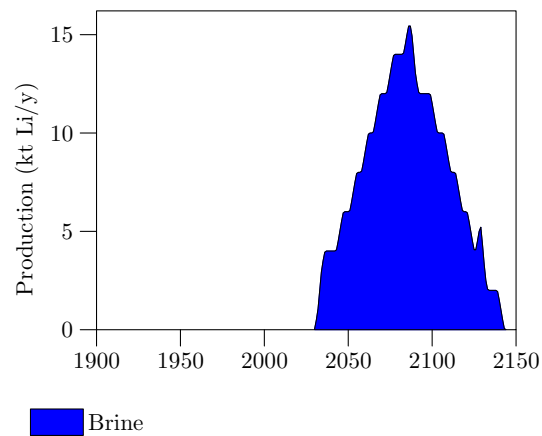
Type	URR		
	Low	BG	High
Brine Dead Sea			900.0
Brine Total	-	-	900.0
Lithium	-	-	900.0

1.5.2. Middle East.



A Low

B BG



C High

FIGURE 1.27. Scenarios for Middle East

TABLE 1.75. Peak years for Middle East

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Brine			2086			15.4
Lithium			2086			15.4

TABLE 1.76. URR values for Middle East

Type	URR		
	Low	BG	High
Brine			900.0
Lithium	-	-	900.0

1.6. North America

1.6.1. Canada.

TABLE 1.77. Mining constants for Canada

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Oilfield Brine Fox Creek	2025	257.5	4	1	1	60	60	NA	NA
Low Mineral Sep. Rapids	2020	36.1	4	0.5	0.5	35	35	NA	NA
Low Spodumene La Motte	2020	11.3	4	0.37	0.37	35	35	NA	NA
Low Spodumene La Corne	2012	53	4	3.6	3.6	20	20	NA	NA
Low Mineral Wekusko	2025	13	4	0.7	0.7	25	25	NA	NA
Low Mineral Old Mines	1955	5.520	4	0.7	0.7	60	60	NA	NA
Low Spodumene Bernic Lake 1	1986	14.364	4	0.7	0.7	60	60	NA	NA
Low Spodumene Bernic Lake 2	2020	9.3	4	0.7	0.7	60	60	NA	NA
BG Oilfield Brine Fox Creek	2025	257.5	4	1	1	60	60	NA	NA
BG Mineral Sep. Rapids	2020	56	4	0.5	0.5	35	35	NA	NA
BG Spodumene La Motte	2020	23	4	0.7	0.7	40	40	NA	NA
BG Spodumene La Corne	2012	163.3	4	3.6	3.6	60	60	NA	NA
BG Mineral Wekusko	2025	54	4	1.5	1.5	40	40	NA	NA
BG Mineral Old Mines	1955	5.520	4	0.7	0.7	60	60	NA	NA
BG Spodumene Bernic Lake 1	1986	14.364	4	0.7	0.7	60	60	NA	NA
BG Spodumene Bernic Lake 2	2020	18.6	4	0.7	0.7	60	60	NA	NA
High Oilfield Brine Fox Creek	2025	515	4	2	2	60	60	NA	NA
High Mineral Yellowknife	2025	65	4	1.2	1.2	60	60	NA	NA
High Mineral Sep. Rapids	2020	56	4	0.5	0.5	35	35	NA	NA
High Spodumene La Motte	2020	23	4	0.7	0.7	40	40	NA	NA
High Spodumene La Corne	2012	163.3	4	3.6	3.6	60	60	NA	NA
High Mineral Wekusko	2025	54	4	1.5	1.5	40	40	NA	NA
High Mineral Old Mines	1955	5.520	4	0.7	0.7	60	60	NA	NA
High Spodumene Bernic Lake 1	1986	14.364	4	0.7	0.7	60	60	NA	NA
High Spodumene Bernic Lake 2	2020	18.6	4	0.7	0.7	60	60	NA	NA

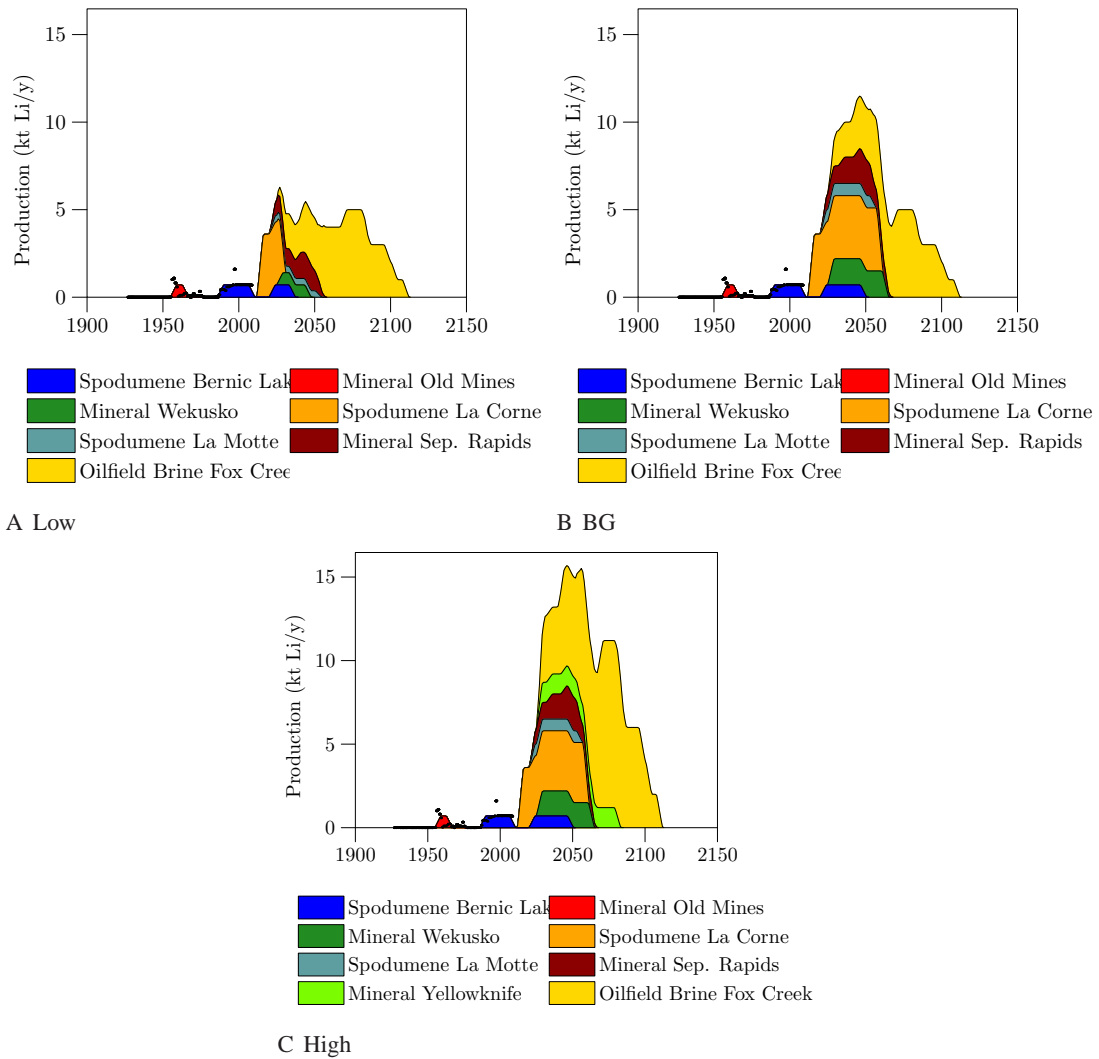


FIGURE 1.28. Scenarios for Canada

TABLE 1.78. Peak years for Canada

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Mineral Old Mines	1961	1961	1961	0.7	0.7	0.7
Mineral Sep. Rapids	2044	2048	2048	1.5	2.0	2.0
Mineral Wekusko	2036	2045	2045	0.7	1.5	1.5
Mineral Yellowknife			2054			1.2
Mineral Total	2042	2048	2048	2.2	3.5	4.7
Oilfield Brine Fox Creek	2076	2076	2076	5.0	5.0	10.0
Oilfield Brine Total	2076	2076	2076	5.0	5.0	10.0
Spodumene Bernic Lake	2011	2018	2018	0.7	0.7	0.7
Spodumene La Corne	2021	2036	2036	3.6	3.6	3.6
Spodumene La Motte	2037	2038	2038	0.4	0.7	0.7
Spodumene Total	2025	2035	2035	4.7	5.0	5.0
Lithium	2027	2046	2046	6.3	11.5	15.7

TABLE 1.79. URR values for Canada

Type	URR		
	Low	BG	High
Mineral Old Mines	5.5	5.5	5.5
Mineral Sep. Rapids	36.1	56.0	56.0
Mineral Wekusko	13.0	54.0	54.0
Mineral Yellowknife			65.0
Mineral Total	54.6	115.5	180.5
Oilfield Brine Fox Creek	257.5	257.5	515.0
Oilfield Brine Total	257.5	257.5	515.0
Spodumene Bernic Lake	23.7	33.0	33.0
Spodumene La Corne	53.0	163.3	163.3
Spodumene La Motte	11.3	23.0	23.0
Spodumene Total	88.0	219.3	219.3
Lithium	400.1	592.3	914.8

1.6.2. USA.

TABLE 1.80. Mining constants for USA

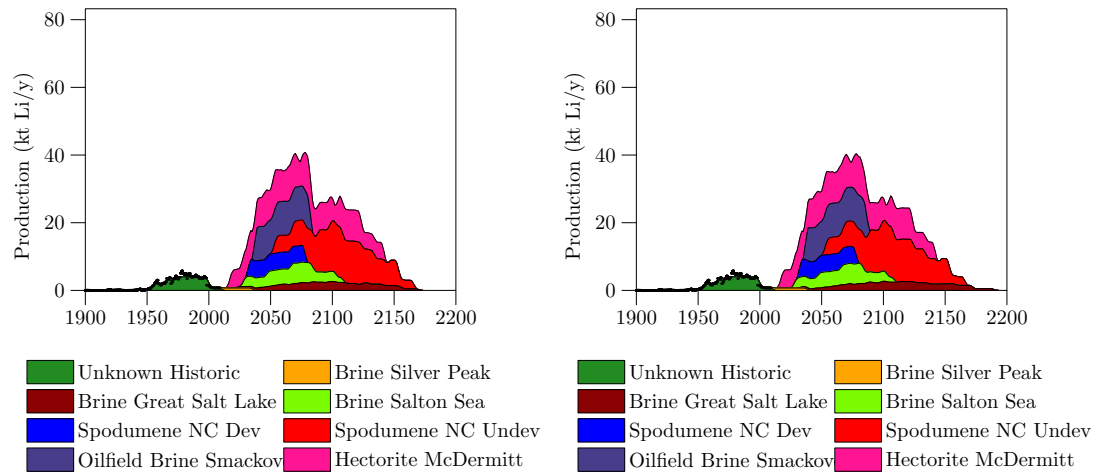
Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Hectorite McDermitt	2014	1000	1	2.6	5	20	60	2060	0.37e-1
Low Oilfield Brine Smackover	2035	450	3	10	10	60	60	NA	NA
Low Spodumene NC Undev	2050	1000	3	2.5	2.5	60	60	NA	NA
Low Spodumene NC Dev	2030	230	3	5	5	60	60	NA	NA
Low Brine Salton Sea	2025	316	3	1.5	1.5	60	60	NA	NA
Low Brine Great Salt Lake	2020	236.7	3	0.2	0.5	40	80	2060	0.37e-1
Low Brine Silver Peak	2008	18	6	0.7	0.7	70	70	NA	NA
Low Unknown Historic	1950	164.528	6	1	1	50	50	NA	NA
BG Hectorite McDermitt	2014	1000	1	2.6	5	20	60	2060	0.37e-1
BG Oilfield Brine Smackover	2035	500	3	10	10	60	60	NA	NA
BG Spodumene NC Undev	2050	1000	3	2.5	2.5	60	60	NA	NA
BG Spodumene NC Dev	2030	230	3	5	5	60	60	NA	NA
BG Brine Salton Sea	2025	316	3	1.5	1.5	60	60	NA	NA
BG Brine Great Salt Lake	2030	260	3	0.2	0.5	40	80	2060	0.37e-1
BG Brine Silver Peak	2008	20	6	0.7	0.7	70	70	NA	NA
BG Unknown Historic	1950	164.528	6	1	1	50	50	NA	NA
High Hectorite McDermitt	2014	2000	1	2.6	5	20	60	2060	0.37e-1
High Oilfield Brine Smackover	2035	750	3	7	7	60	60	NA	NA
High Spodumene NC	2050	5454	3	2.5	2.5	60	60	NA	NA
High Brine Salton Sea	2025	1316	3	3	3	60	60	NA	NA
High Brine Great Salt Lake	2030	260	3	0.2	0.5	40	80	2060	0.37e-1
High Brine Searles Lake	2020	14	6	0.5	0.5	70	70	NA	NA
High Brine Silver Peak	2008	300	6	0.35	0.35	70	70	NA	NA
High Unknown Historic	1950	164.528	6	1	1	50	50	NA	NA

TABLE 1.81. Peak years for USA

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Brine Great Salt Lake	2099	2100	2100	2.6	2.7	2.7
Brine Salton Sea	2074	2074	2077	6.0	6.0	18.0
Brine Searles Lake			2036			0.5
Brine Silver Peak	2023	2024	2073	0.7	0.7	4.6
Brine Total	2076	2080	2074	8.4	8.0	24.5
Hectorite McDermitt	2079	2079	2078	11.4	11.4	14.7
Hectorite Total	2079	2079	2078	11.4	11.4	14.7
Oilfield Brine Smackover	2059	2062	2064	10.0	10.0	14.0
Oilfield Brine Total	2059	2062	2064	10.0	10.0	14.0
Spodumene NC			2148			59.3
Spodumene NC Dev	2055	2055		5.0	5.0	
Spodumene NC Undev	2103	2103		15.0	15.0	
Spodumene Total	2103	2103	2148	15.0	15.0	59.3
Unknown Historic	1986	1986	1986	4.0	4.0	4.0
Unknown Total	1986	1986	1986	4.0	4.0	4.0
Lithium	2078	2078	2140	40.8	40.4	79.3

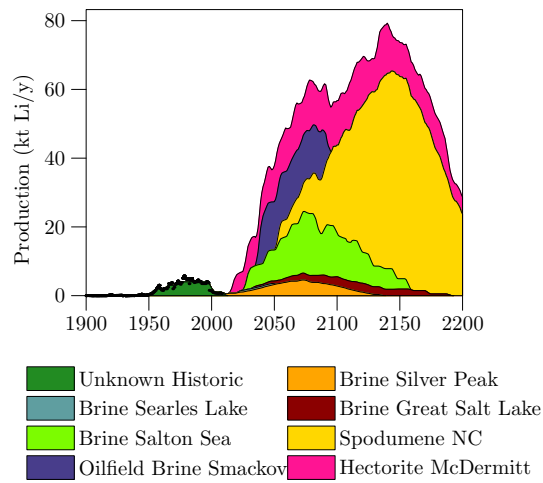
TABLE 1.82. URR values for USA

Type	URR		
	Low	BG	High
Brine Great Salt Lake	236.7	260.0	260.0
Brine Salton Sea	316.0	316.0	1316.0
Brine Searles Lake			14.0
Brine Silver Peak	18.0	20.0	300.0
Brine Total	570.7	596.0	1890.0
Hectorite McDermitt	1000.0	1000.0	2000.0
Hectorite Total	1000.0	1000.0	2000.0
Oilfield Brine Smackover	450.0	500.0	750.0
Oilfield Brine Total	450.0	500.0	750.0
Spodumene NC			5454.0
Spodumene NC Dev	230.0	230.0	
Spodumene NC Undev	1000.0	1000.0	
Spodumene Total	1230.0	1230.0	5454.0
Unknown Historic	164.5	164.5	164.5
Unknown Total	164.5	164.5	164.5
Lithium	3415.2	3490.5	10258.5



A Low

B BG



C High

FIGURE 1.29. Scenarios for USA

1.6.3. North America.

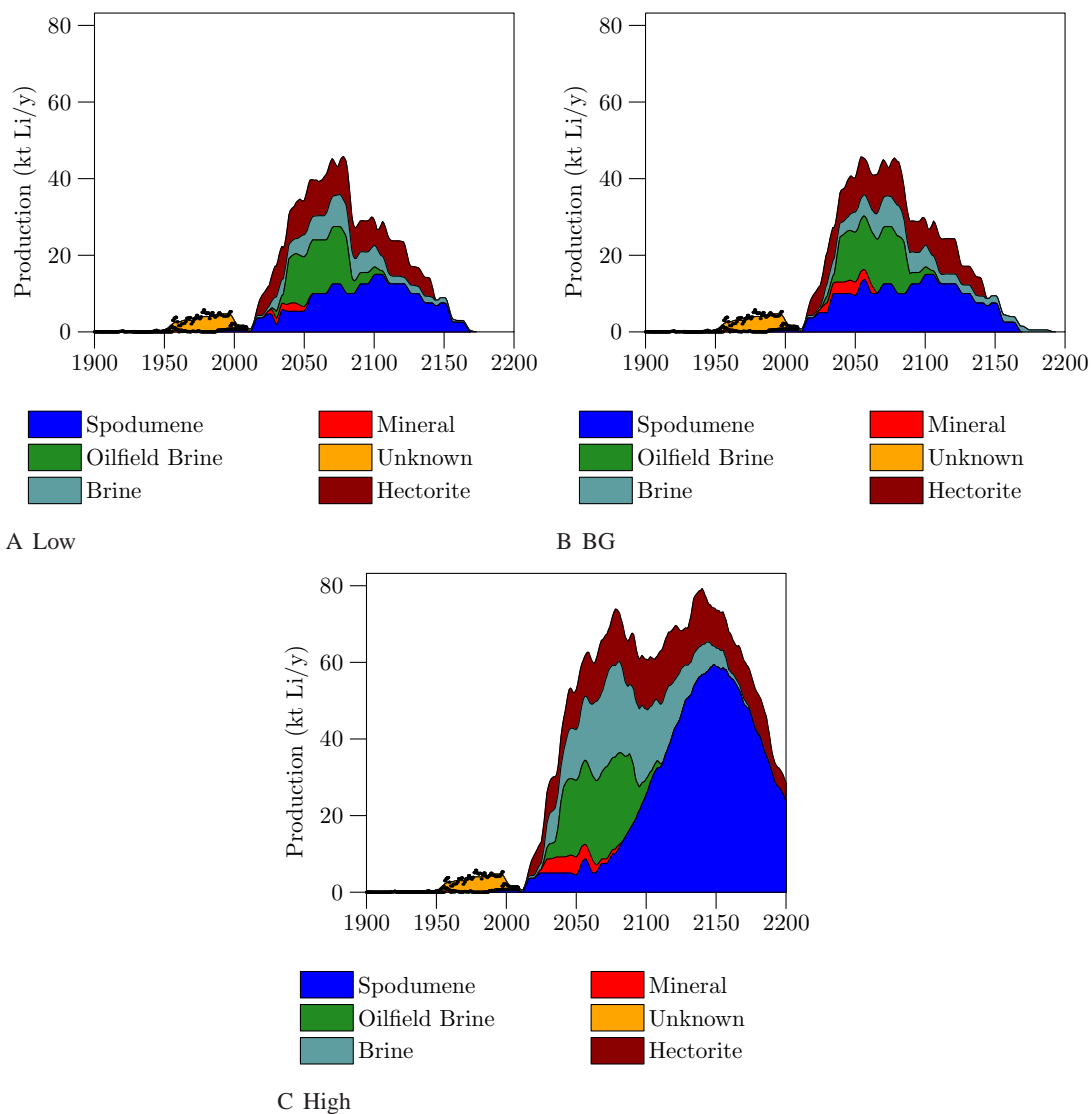


FIGURE 1.30. Scenarios for North America

TABLE 1.83. Peak years for North America

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Brine	2076	2080	2074	8.4	8.0	24.5
Hectorite	2079	2079	2078	11.4	11.4	14.7
Mineral	2042	2048	2048	2.2	3.5	4.7
Oilfield Brine	2075	2076	2076	15.0	15.0	24.0
Spodumene	2103	2103	2148	15.0	15.0	59.3
Unknown	1986	1986	1986	4.0	4.0	4.0
Lithium	2078	2054	2140	45.8	45.7	79.3

TABLE 1.84. URR values for North America

Type	URR		
	Low	BG	High
Brine	2815.3	3082.8	9173.3
Hectorite	3815.3	4082.8	11173.3
Mineral	1372.6	1564.8	5853.8
Oilfield Brine	2080.1	2322.3	7118.8
Spodumene	1318.0	1449.3	5673.3
Unknown	2244.6	2486.8	7283.3
Lithium	13645.9	14988.8	46275.8

1.7. Recycle

1.7.1. Recycle.

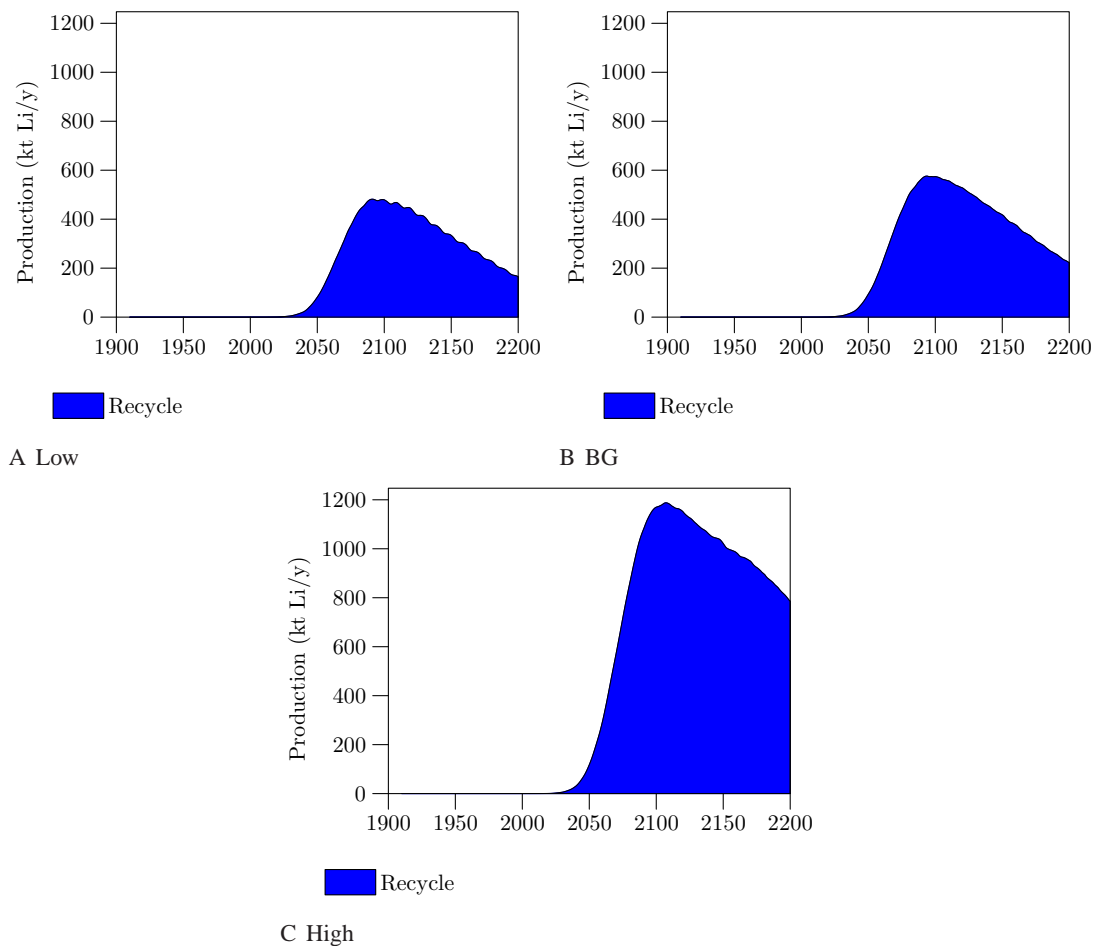


FIGURE 1.31. Scenarios for Recycle

TABLE 1.85. Peak years for Recycle

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Recycle	2091	2094	2107	481.7	576.0	1187.8
Lithium	2091	2094	2107	481.7	576.0	1187.8

TABLE 1.86. URR values for Recycle

Type	URR		
	Low	BG	High
Recycle	55331.7	70107.4	191901.9
Lithium	55331.7	70107.4	191901.9

1.7.2. Recycle.

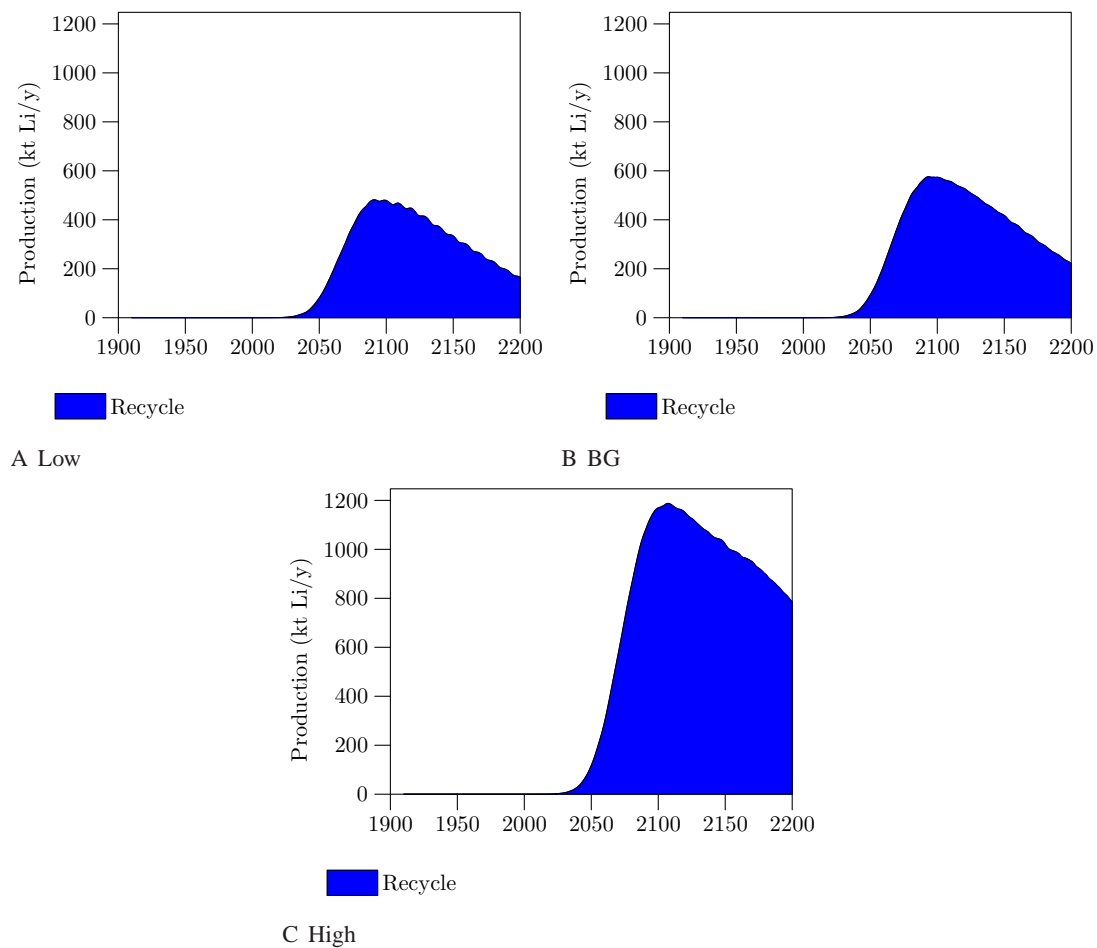


FIGURE 1.32. Scenarios for Recycle

TABLE 1.87. Peak years for Recycle

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Recycle	2091	2094	2107	481.7	576.0	1187.8
Lithium	2091	2094	2107	481.7	576.0	1187.8

TABLE 1.88. URR values for Recycle

Type	URR		
	Low	BG	High
Recycle	55331.7	70107.4	191901.9
Lithium	55331.7	70107.4	191901.9

1.8. South America

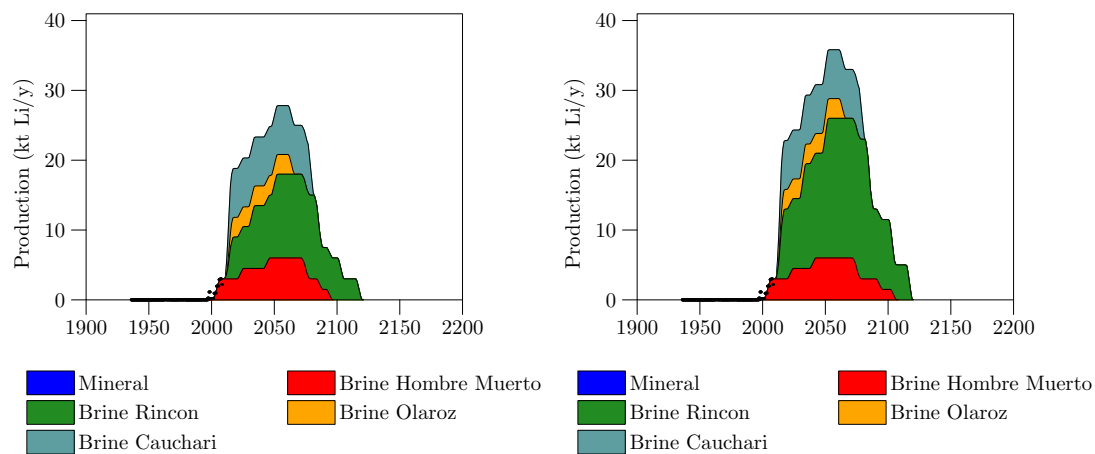
1.8.1. Argentina.

TABLE 1.89. Mining constants for Argentina

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Brine Cauchari	2011	463	4	7	7	90	90	NA	NA
Low Brine Olaroz	2012	140	4	2.82	2.82	90	90	NA	NA
Low Brine Rincon	2011	841.500	4	3	3	75	75	NA	NA
Low Brine Hombre Muerto	2001	382.680	4	1.5	1.5	75	75	NA	NA
Low Mineral	1955	0.298	4	0.9e-2	0.9e-2	50	50	NA	NA
BG Brine Cauchari	2011	463	4	7	7	90	90	NA	NA
BG Brine Olaroz	2012	140	4	2.82	2.82	90	90	NA	NA
BG Brine Rincon	2011	1400	4	5	5	75	75	NA	NA
BG Brine Hombre Muerto	2001	415.93	4	1.5	1.5	75	75	NA	NA
BG Mineral	1955	0.298	4	0.9e-2	0.9e-2	50	50	NA	NA
High Brine Cauchari	2011	463	4	7	7	90	90	NA	NA
High Brine Olaroz	2012	300	4	1.41	1.41	70	70	NA	NA
High Brine Rincon	2011	1400	4	5	5	75	75	NA	NA
High Brine Hombre Muerto	2001	865.930	1	1.5	1.5	75	75	NA	NA
High Mineral	1955	0.298	4	0.9e-2	0.9e-2	50	50	NA	NA

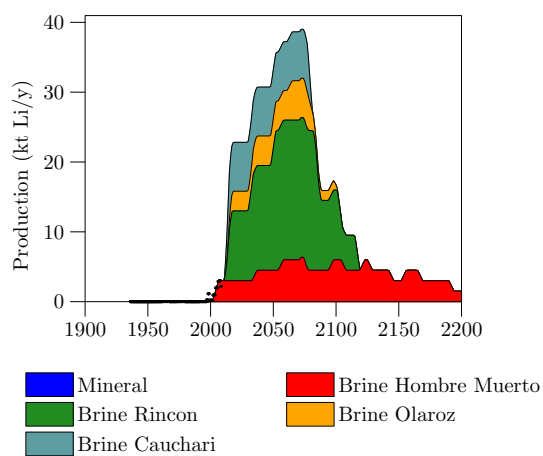
TABLE 1.90. Peak years for Argentina

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Brine Cauchari	2046	2046	2046	7.0	7.0	7.0
Brine Hombre Muerto	2059	2057	2073	6.0	6.0	6.4
Brine Olaroz	2039	2039	2070	2.8	2.8	5.6
Brine Rincon	2067	2067	2067	12.0	20.0	20.0
Brine Total	2057	2057	2073	27.8	35.8	39.0
Mineral	1973	1973	1973	0.0	0.0	0.0
Lithium	2057	2057	2073	27.8	35.8	39.0



A Low

B BG



C High

FIGURE 1.33. Scenarios for Argentina

TABLE 1.91. URR values for Argentina

Type	URR		
	Low	BG	High
Brine Cauchari	463.0	463.0	463.0
Brine Hombre Muerto	382.7	415.9	865.9
Brine Olaroz	140.0	140.0	300.0
Brine Rincon	841.5	1400.0	1400.0
Brine Total	1827.2	2418.9	3028.9
Mineral	0.3	0.3	0.3
Lithium	1827.5	2419.2	3029.2

1.8.2. Bolivia.

TABLE 1.92. Mining constants for Bolivia

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Brine Uyuni	2014	2475	4	2.5	2.5	100	100	NA	NA
BG Brine Uyuni	2014	3560	4	2.5	2.5	100	100	NA	NA
High Brine Uyuni	2014	10200	4	2.5	2.5	100	100	NA	NA

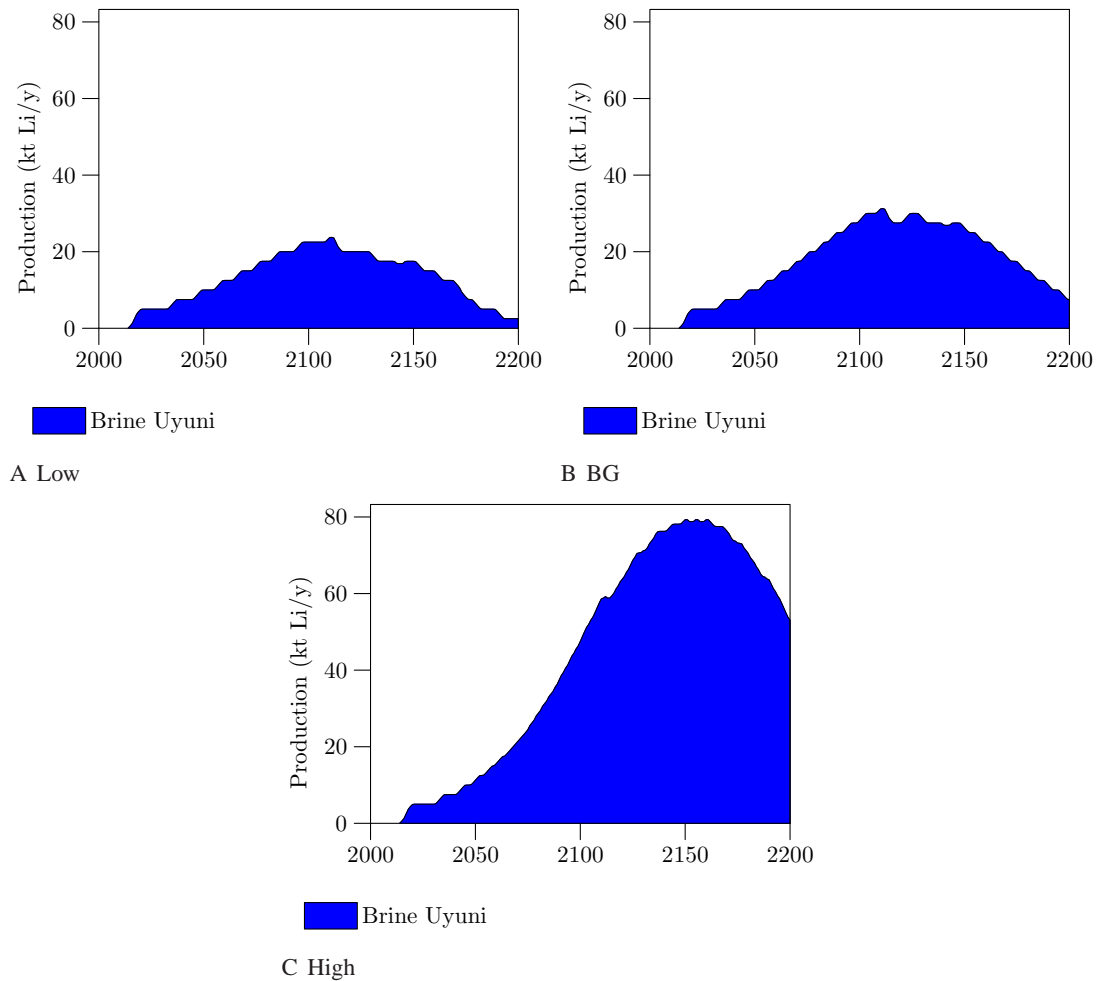


FIGURE 1.34. Scenarios for Bolivia

TABLE 1.93. Peak years for Bolivia

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Brine Uyuni	2111	2111	2155	23.8	31.3	79.3
Brine Total	2111	2111	2155	23.8	31.3	79.3
Lithium	2111	2111	2155	23.8	31.3	79.3

TABLE 1.94. URR values for Bolivia

Type	URR		
	Low	BG	High
Brine Uyuni	2475.0	3560.0	10200.0
Brine Total	2475.0	3560.0	10200.0
Lithium	2475.0	3560.0	10200.0

1.8.3. Brazil.

TABLE 1.95. Mining constants for Brazil

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Mineral	1998	46.152	3	0.1	0.1	60	60	NA	NA
BG Mineral	1998	88.652	2	0.1	0.1	60	60	NA	NA
High Mineral	1998	193.652	2	0.1	0.1	60	60	NA	NA

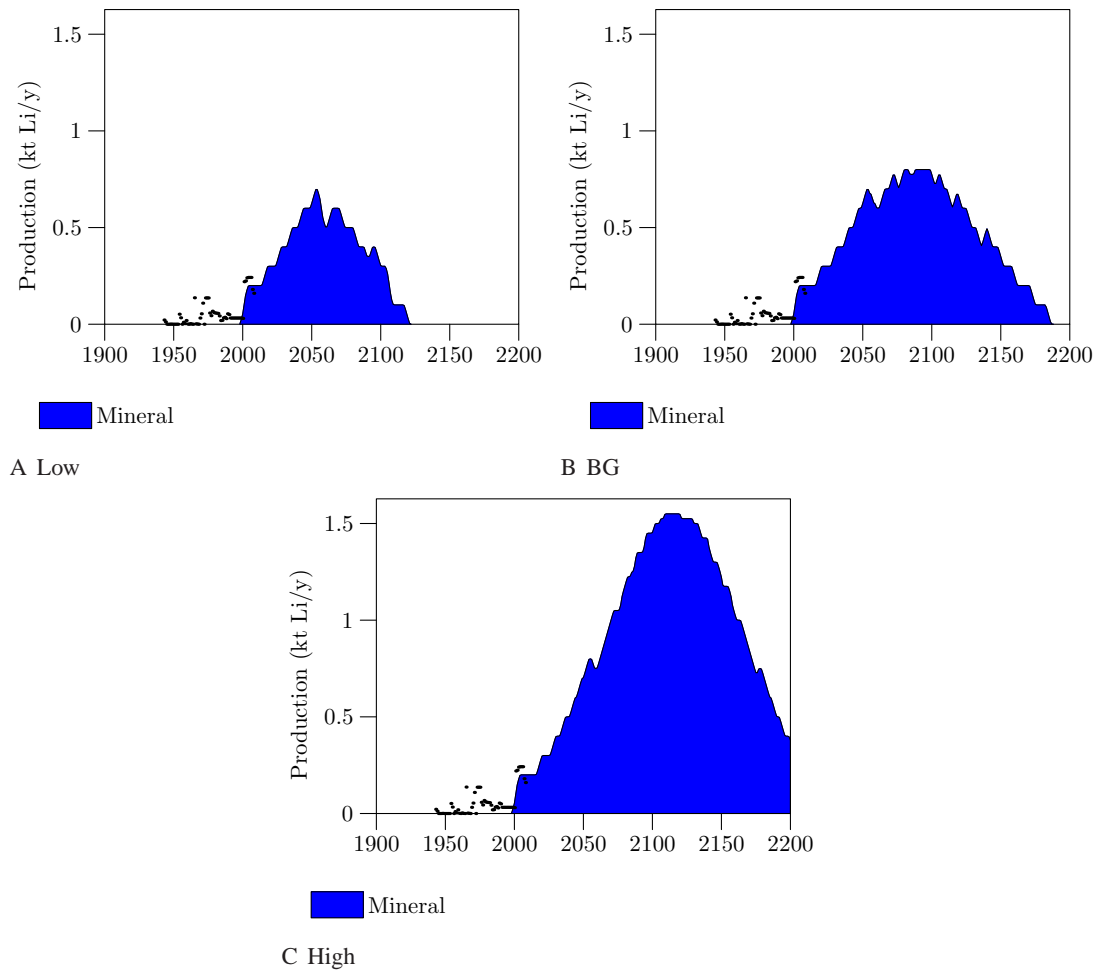


FIGURE 1.35. Scenarios for Brazil

TABLE 1.96. Peak years for Brazil

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Mineral	2053	2089	2114	0.7	0.8	1.6
Lithium	2053	2089	2114	0.7	0.8	1.6

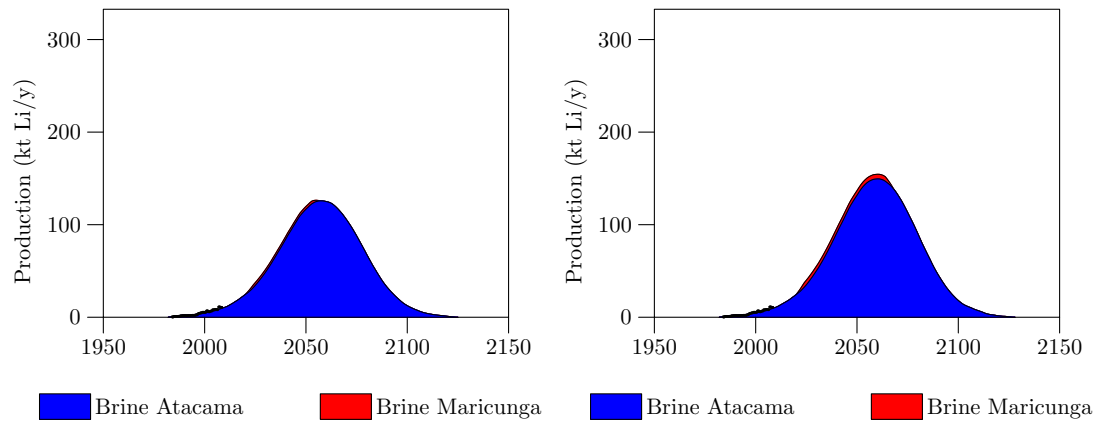
TABLE 1.97. URR values for Brazil

Type	URR		
	Low	BG	High
Mineral	46.2	88.7	193.7
Lithium	46.2	88.7	193.7

1.8.4. Chile.

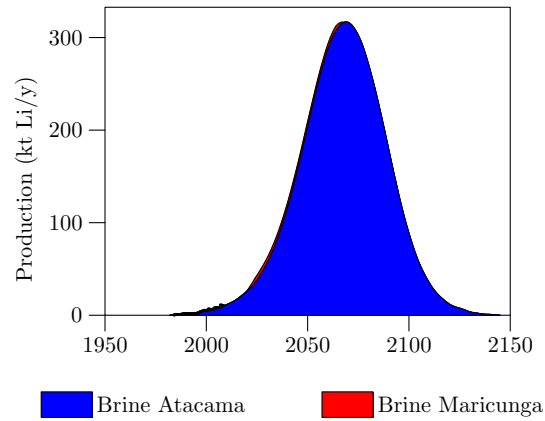
TABLE 1.98. Mining constants for Chile

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Brine Maricunga	2020	99	4	3	3	55	55	NA	NA
Low Brine Atacama	1982	6404.84	4.5	1	1	40	40	NA	NA
BG Brine Maricunga	2020	220	4	5	5	70	70	NA	NA
BG Brine Atacama	1982	7604.84	4.5	1	1	40	40	NA	NA
High Brine Maricunga	2020	220	4	5	5	70	70	NA	NA
High Brine Atacama	1982	16169.84	4.5	1	1	40	40	NA	NA



A Low

B BG



C High

FIGURE 1.36. Scenarios for Chile

TABLE 1.99. Peak years for Chile

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Brine Atacama	2057	2060	2069	125.7	149.5	316.9
Brine Maricunga	2038	2044	2044	3.0	5.0	5.0
Brine Total	2055	2060	2069	126.4	154.5	316.9
Lithium	2055	2060	2069	126.4	154.5	316.9

TABLE 1.100. URR values for Chile

Type	URR		
	Low	BG	High
Brine Atacama	6404.8	7604.8	16169.8
Brine Maricunga	99.0	220.0	220.0
Brine Total	6503.8	7824.8	16389.8
Lithium	6503.8	7824.8	16389.8

1.8.5. Suriname.

TABLE 1.101. Mining constants for Suriname

Name	Y_s	Q_T	r_{Q_T}	M_L	M_H	L_L	L_H	t_t	r_t
Low Amblygonite	1960	0.71e-1	4	0.12	0.12	60	60	NA	NA
BG Amblygonite	1960	0.71e-1	4	0.12	0.12	60	60	NA	NA
High Amblygonite	1960	0.71e-1	4	0.12	0.12	60	60	NA	NA

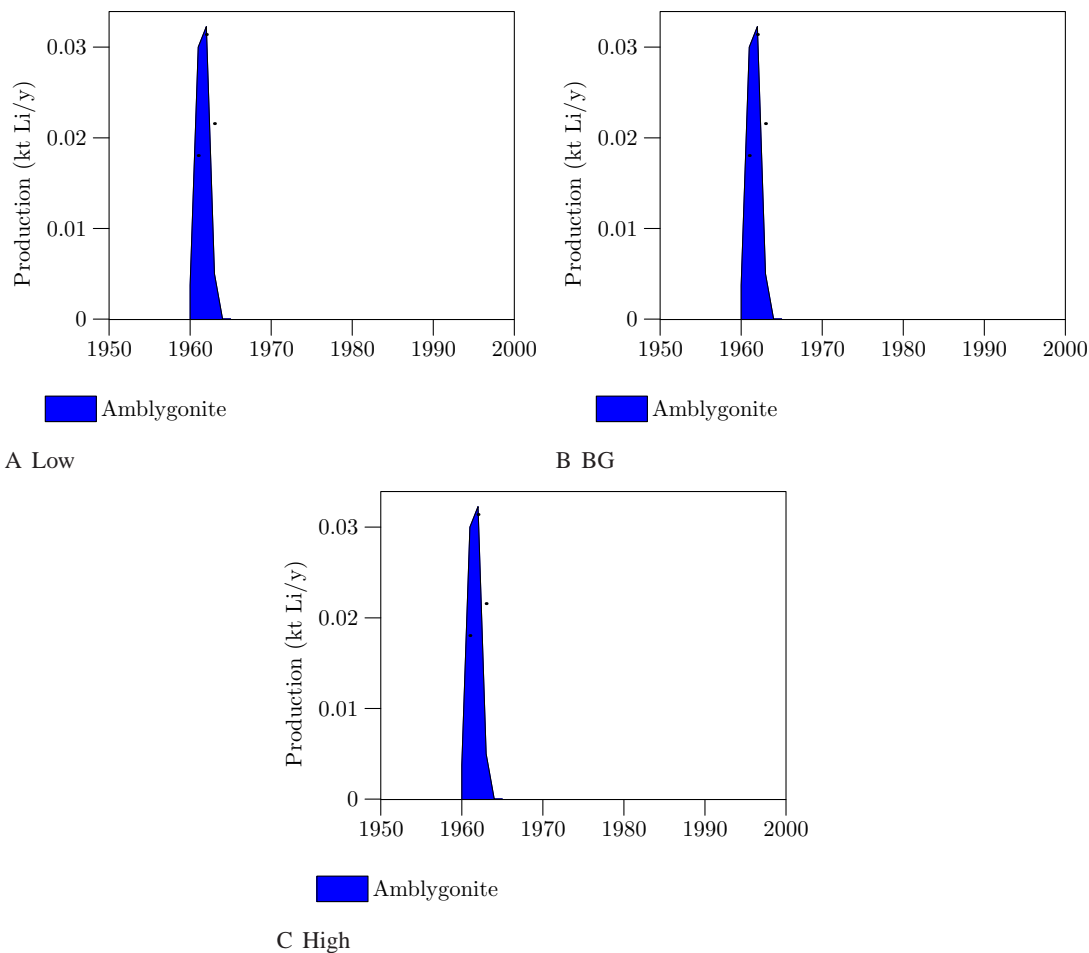


FIGURE 1.37. Scenarios for Suriname

TABLE 1.102. Peak years for Suriname

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite	1962	1962	1962	0.0	0.0	0.0
Lithium	1962	1962	1962	0.0	0.0	0.0

TABLE 1.103. URR values for Suriname

Type	URR		
	Low	BG	High
Amblygonite	0.1	0.1	0.1
Lithium	0.1	0.1	0.1

1.8.6. South America.

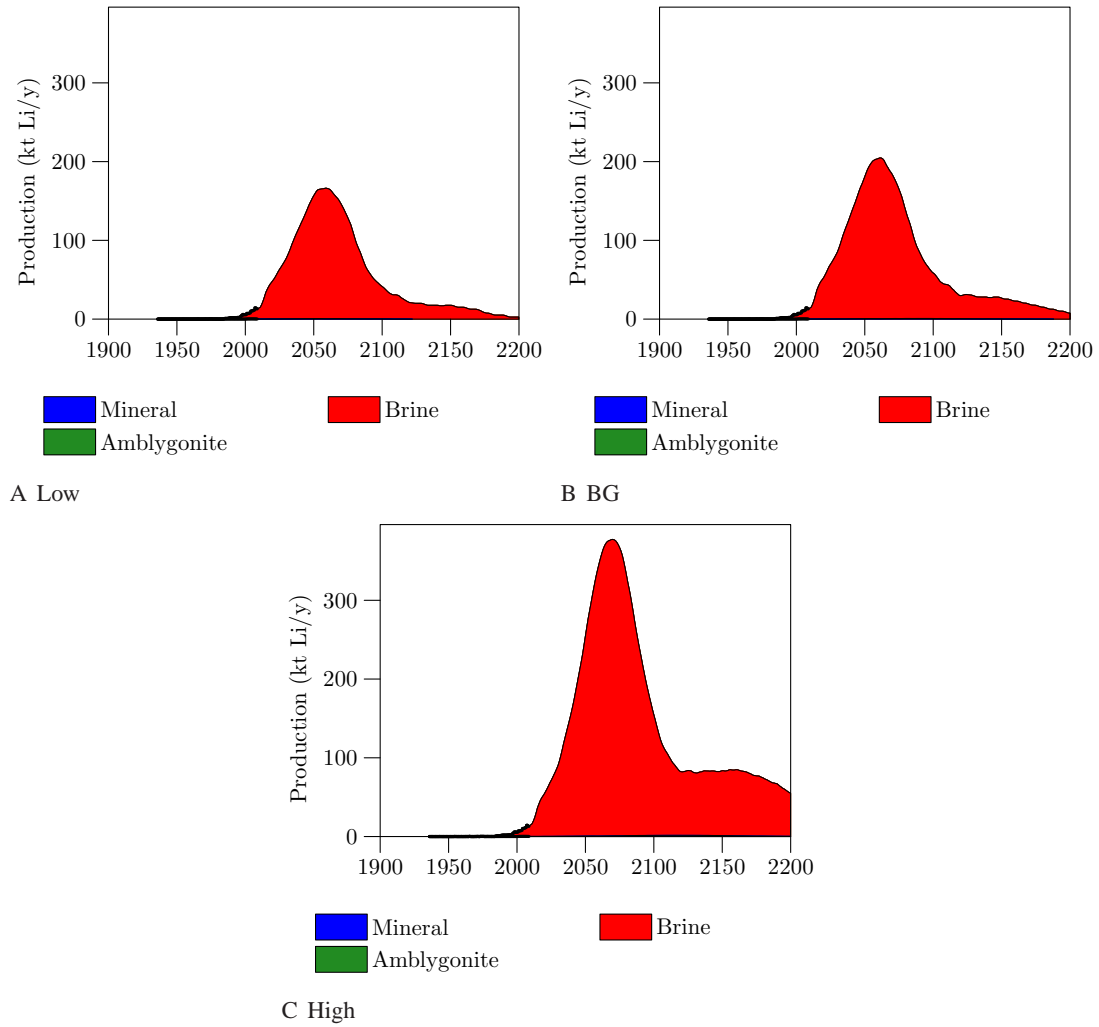


FIGURE 1.38. Scenarios for South America

TABLE 1.104. Peak years for South America

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite	1962	1962	1962	0.0	0.0	0.0
Brine	2059	2061	2070	165.7	204.0	376.3
Mineral	2053	2089	2114	0.7	0.8	1.6
Lithium	2059	2061	2070	166.2	204.6	377.3

TABLE 1.105. URR values for South America

Type	URR		
	Low	BG	High
Amblygonite	10852.5	13892.8	29812.8
Brine	10852.5	13892.7	29812.7
Mineral	46.5	89.0	194.0
Lithium	21751.5	27874.5	59819.5

1.9. World

1.9.1. World by Continent.

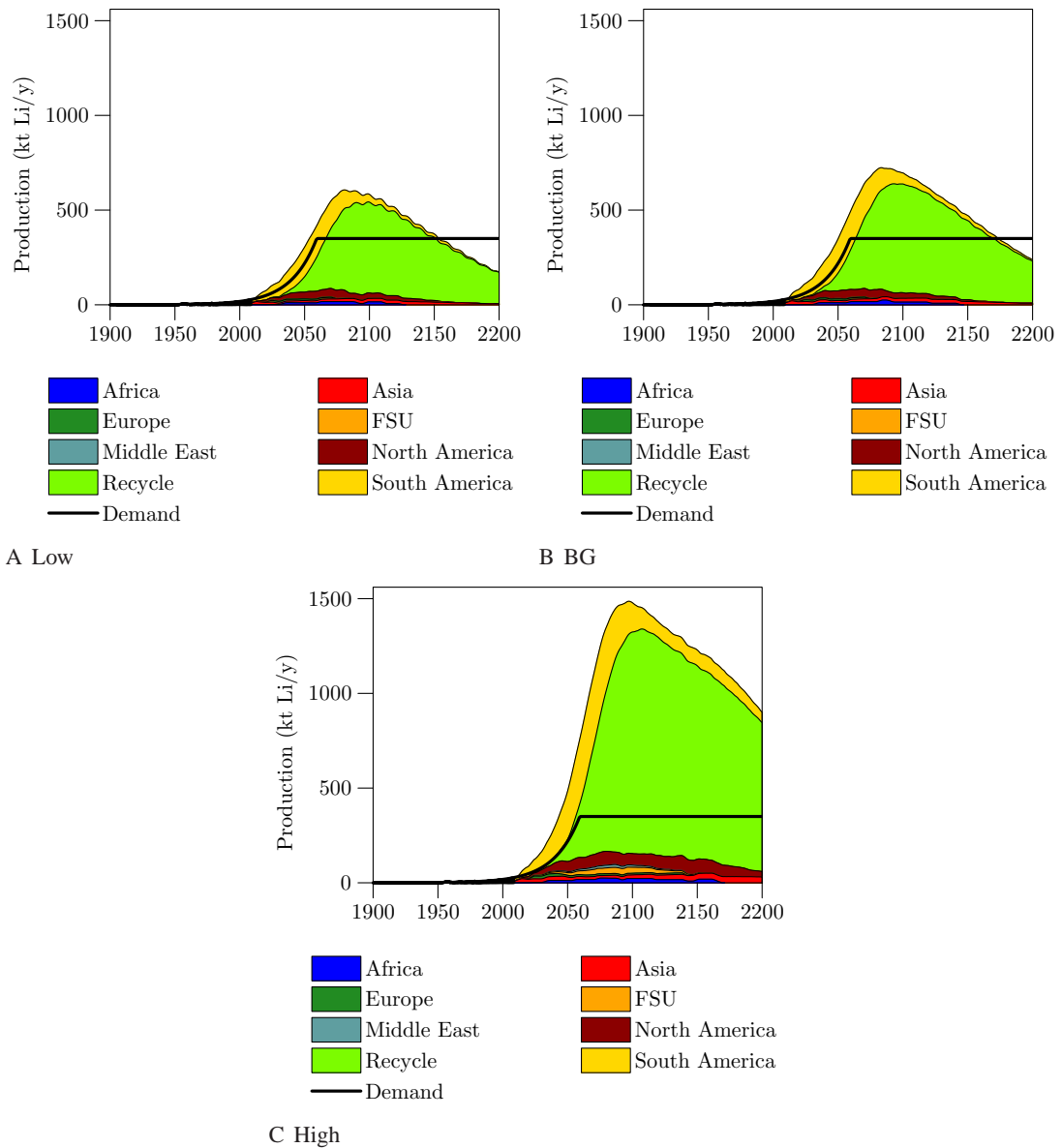


FIGURE 1.39. Scenarios for World by Continent

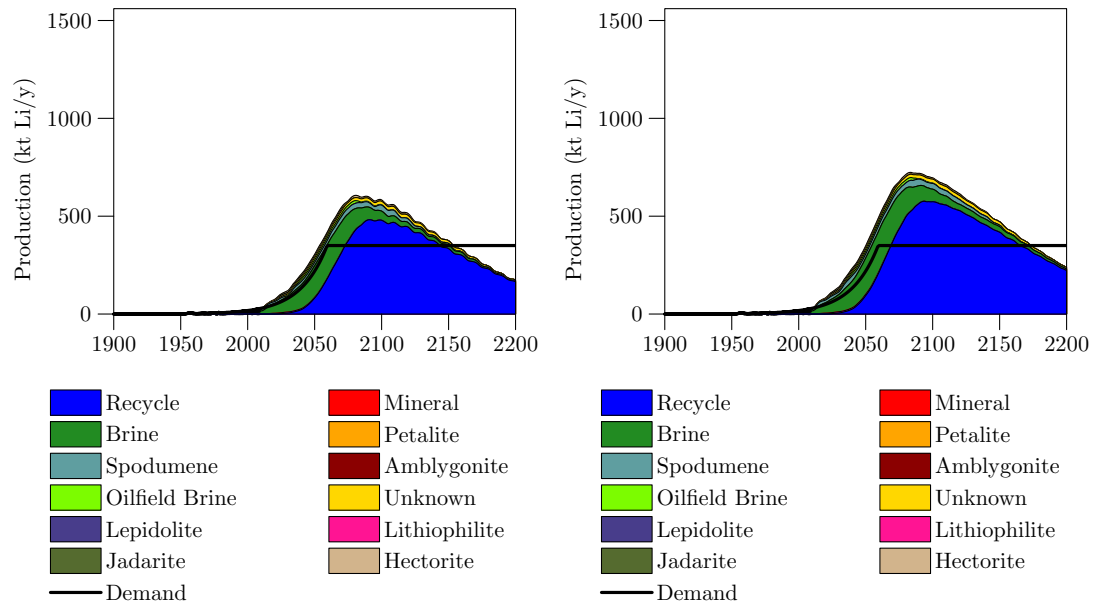
TABLE 1.106. Peak years for World by Continent

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Africa	2075	2085	2077	17.0	25.1	24.9
Asia	2112	2112	2175	18.2	20.9	32.8
Europe	2032	2025	2042	9.2	9.4	15.0
FSU	2029	2029	2091	2.0	2.0	33.0
Middle East			2086			15.4
North America	2078	2054	2140	45.8	45.7	79.3
Recycle	2091	2094	2107	481.7	576.0	1187.8
South America	2059	2061	2070	166.2	204.6	377.3
Total	2081	2083	2097	606.5	723.9	1486.3

TABLE 1.107. URR values for World by Continent

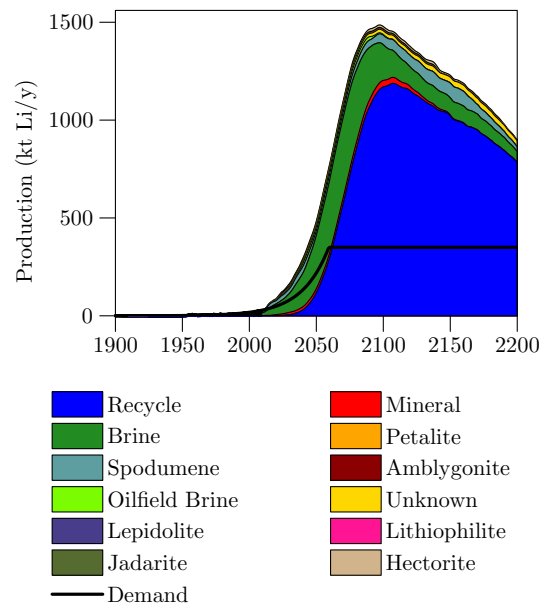
Type	URR		
	Low	BG	High
Africa	1246.4	1605.5	2448.8
Asia	2771.7	3330.3	6932.6
Europe	453.1	466.7	1219.7
FSU	179.8	179.8	2529.8
Middle East	-	-	900.0
North America	3815.3	4082.8	11173.3
Recycle	55331.7	70107.4	191901.9
South America	10852.5	13892.8	29812.8
Total	74650.5	93665.2	246918.8

1.9.2. World by Fuel.



A Low

B BG



C High

FIGURE 1.40. Scenarios for World by Fuel

TABLE 1.108. Peak years for World by Fuel

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite	1959	1959	1959	0.1	0.1	0.1
Brine	2059	2061	2071	172.0	209.8	410.6
Hectorite	2079	2079	2078	11.4	11.4	14.7
Jadarite	2047	2047	2081	8.4	8.4	8.4
Lepidolite	2007	2007	2070	0.1	0.1	1.1
Lithiophilite	1952	1952	1952	0.0	0.0	0.0
Mineral	2029	2047	2091	5.7	6.8	34.4
Oilfield Brine	2075	2076	2076	15.0	15.0	24.0
Petalite	1968	1968	1968	0.0	0.0	0.0
Recycle	2091	2094	2107	481.7	576.0	1187.8
Spodumene	2103	2087	2152	30.7	35.7	77.8
Unknown	2112	2112	2175	18.2	20.9	32.8
Lithium	2081	2083	2097	606.5	723.9	1486.3

TABLE 1.109. URR values for World by Fuel

Type	URR		
	Low	BG	High
Amblygonite	0.8	0.8	0.8
Brine	11376.7	14399.8	32408.8
Hectorite	1000.0	1000.0	2000.0
Jadarite	425.0	425.0	990.0
Lepidolite	0.9	0.9	72.9
Lithiophilite	-	-	-
Mineral	383.5	504.6	3080.9
Oilfield Brine	707.5	757.5	1265.0
Petalite	0.1	0.1	0.1
Recycle	55331.7	70107.4	191901.9
Spodumene	2701.3	3338.5	8802.5
Unknown	2722.9	3130.6	6395.9
Lithium	74650.5	93665.2	246918.8

1.9.3. Lithium.

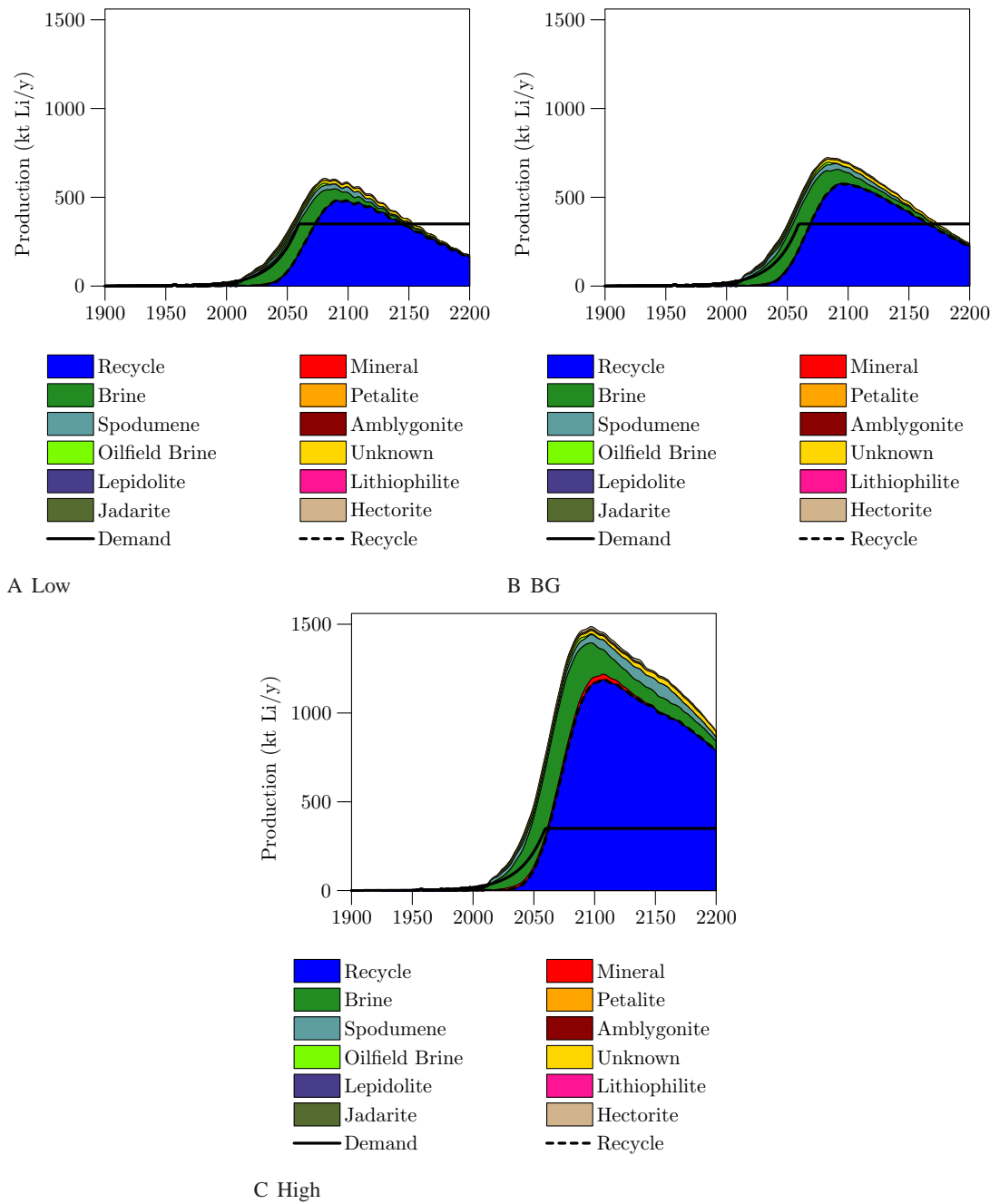


FIGURE 1.41. Scenarios for Lithium

TABLE 1.110. Peak years for Lithium

Type	Peak Year			Max Production		
	Low	BG	High	Low	BG	High
Amblygonite	1959	1959	1959	0.1	0.1	0.1
Brine	2059	2061	2071	172.0	209.8	410.6
Hectorite	2079	2079	2078	11.4	11.4	14.7
Jadarite	2047	2047	2081	8.4	8.4	8.4
Lepidolite	2007	2007	2070	0.1	0.1	1.1
Lithiophilite	1952	1952	1952	0.0	0.0	0.0
Mineral	2029	2047	2091	5.7	6.8	34.4
Oilfield Brine	2075	2076	2076	15.0	15.0	24.0
Petalite	1968	1968	1968	0.0	0.0	0.0
Recycle	2091	2094	2107	481.7	576.0	1187.8
Spodumene	2103	2087	2152	30.7	35.7	77.8
Unknown	2112	2112	2175	18.2	20.9	32.8
Lithium	2081	2083	2097	606.5	723.9	1486.3

TABLE 1.111. URR values for Lithium

Type	URR		
	Low	BG	High
Amblygonite	0.8	0.8	0.8
Brine	11376.7	14399.8	32408.8
Hectorite	1000.0	1000.0	2000.0
Jadarite	425.0	425.0	990.0
Lepidolite	0.9	0.9	72.9
Lithiophilite	-	-	-
Mineral	383.5	504.6	3080.9
Oilfield Brine	707.5	757.5	1265.0
Petalite	0.1	0.1	0.1
Recycle	55331.7	70107.4	191901.9
Spodumene	2701.3	3338.5	8802.5
Unknown	2722.9	3130.6	6395.9
Lithium	74650.5	93665.2	246918.8