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**EXAMINATION OF STATISTICS AND REVIEW OF THE CURRENT
MARKET SITUATION AND OUTLOOK**

Recent developments and short-term outlook in the tungsten market

Report by the UNCTAD secretariat

Corrigendum

- (a) Annexes I, II, IV, V, VII, and VIII are replaced by those attached herewith.
- (b) Annex VI.

Column (1): For Bolibia read Bolivia

Column (4): Insert a division symbol in the heading so that it reads Ratios [(2) ÷ (3)]

Annex I

Economic growth rates and forecasts in selected countries, 1983-1992 ^{a/}

Country/region	1983	1984	1985	1986	1987	1988	1989	1990	1991	Forecast 1992
<u>World economy</u>	<u>2.1</u>	<u>4.2</u>	<u>3.5</u>	<u>3.0</u>	<u>3.5</u>	<u>4.3</u>	<u>3.3</u>	<u>2.4</u>	<u>-0.3</u>	<u>1.4</u>
<u>Developed market-economy countries</u>	<u>2.4</u>	<u>4.5</u>	<u>3.4</u>	<u>2.7</u>	<u>3.4</u>	<u>4.2</u>	<u>3.5</u>	<u>2.4</u>	<u>0.8</u>	<u>1.8</u>
Canada	3.2	6.3	4.8	3.3	4.0	4.4	3.0	0.8	-1.6	...
France	0.7	1.6	1.9	2.2	1.9	3.4	3.4	2.8	1.5	2.2
Germany ^{b/}	1.5	3.0	2.0	2.4	1.7	3.6	4.3	4.5	1.2	2.0
Italy	1.1	3.0	2.6	2.5	3.0	4.1	3.2	2.2	1.3	...
Japan	3.2	5.1	4.6	2.5	4.2	5.7	4.8	5.6	4.5	2.2
Sweden	2.5	3.0	2.5	1.7	2.8	2.5	2.1	0.9	-1.5	...
United Kingdom	3.5	2.9	3.7	3.5	4.7	4.2	2.3	0.6	-2.2	0.8
United States	3.5	6.5	3.8	2.8	3.7	4.4	3.0	2.3	-0.7	1.6
<u>Developing countries</u>	<u>1.1</u>	<u>2.9</u>	<u>2.9</u>	<u>3.3</u>	<u>3.3</u>	<u>4.1</u>	<u>3.1</u>	<u>1.3</u>	<u>3.3</u>	<u>6.7</u>
Brazil	-3.4	5.1	8.4	7.5	3.7	0.0	3.6	-4.0	-1.0	...
India	7.4	3.7	6.2	4.8	4.5	9.4	5.0	4.7	3.5	...
Republic of Korea	11.8	9.4	6.9	12.4	11.8	11.3	6.1	9.0	8.3	7.3
Mexico	-4.2	3.6	2.6	-3.8	1.9	1.5	3.2	4.0	...	3.0
Thailand	7.3	7.1	3.5	4.9	9.5	13.2	12.0	10.0	7.5	8.0
China ^{c/}	7.1	7.9	12.3	7.4	9.4	11.0	4.0	5.2	7.0	10.6
<u>Countries of Eastern Europe ^{c/}</u>	<u>4.2</u>	<u>3.5</u>	<u>3.2</u>	<u>4.3</u>	<u>2.6</u>	<u>4.0</u>	<u>1.8</u>	<u>-6.3</u>	<u>-16.6</u>	<u>-1.0</u>
Ex-USSR	4.2	2.9	3.5	4.1	2.3	4.4	2.4	-4.0	-17.0	-17.0

Source: Trade and Development Report, UNCTAD, recent issues; Handbook of International Trade and Development Statistics, UNCTAD, recent issues; World Economic Survey, United Nations (New York), recent issues; World Economic Outlook, IMF, recent issues; Main Economic Indicators, OECD, recent issues.

a/ Rates refer to real gross domestic product or gross national product, unless otherwise specified.

b/ Includes East Germany as from 1991. Prior to this date figures for the former German Democratic Republic are included in one set of data for Eastern Europe.

c/ Net material product.

Annex II

Consumption of tungsten ores and concentrates, 1982-1992
(Metric tons of tungsten content)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992 a/
<u>World</u>	<u>39,950</u>	<u>39,902</u>	<u>47,415</u>	<u>44,968</u>	<u>42,456</u>	<u>43,383</u>	<u>46,183</u>	<u>47,902</u>	<u>42,237</u>	<u>37,249</u>	
of which:											
<u>Developed market-economy countries</u>	<u>12,640</u>	<u>13,711</u>	<u>20,149</u>	<u>17,112</u>	<u>13,636</u>	<u>14,243</u>	<u>15,900</u>	<u>15,221</u>	<u>11,292</u>	<u>10,409</u>	
Austria	1,304	1,629	2,096	(2,000)	(2,000)	(2,000)	(2,100)	(1,800)	(1,800)	1,600	
Canada	-	-	-	-	6	765	386	300	290	200	
France	653	520	815	808	677	269	34	-	-	-	
Germany Fed. Rep. of	1,541	2,030	3,934	2,073	1,720	1,863	2,144	2,576	749	(400)	
Germany, (former) Dem. Rep.	300	300	300	300	300	300	300	300	300	-	
Japan	1,880	1,994	2,302	2,616	2,145	2,119	1,980	1,538	1,440	(1,400)	
Netherlands	(300)	(300)	(300)	(400)	(350)	(300)	(330)	(350)	(200)	-	
Sweden	994	774	765	820	855	567	324	320	380	202	
United Kingdom	367	270	250	240	230	(100)	(50)	(50)	(50)	(20)	
United States	4,506	5,181	8,577	6,838	4,804	5,506	7,832	7,725	5,878	(6,400)	
Others	795	713	810	1,017	549	454	420	262	205	187	
<u>Developing countries</u>	<u>2,698</u>	<u>2,318</u>	<u>2,872</u>	<u>3,453</u>	<u>2,956</u>	<u>3,196</u>	<u>2,559</u>	<u>2,931</u>	<u>2,595</u>	<u>2,640</u>	
Brazil	454	450	538	1,048	672	867	753	(688)	(400)	(400)	
India	454	250	157	250	230	(250)	187	(200)	(200)	(200)	
Republic of Korea	1,742	1,555	2,070	2,048	1,987	1,950	1,580	2,000	(1950)	(2,000)	
Others	48	63	107	107	67	129	39	43	45	40	
<u>Countries of Eastern Europe</u>	<u>(19,012)</u>	<u>(18,873)</u>	<u>(18,394)</u>	<u>(17,403)</u>	<u>18,064</u>	<u>17,444</u>	<u>(15,224)</u>	<u>(14,250)</u>	<u>(12,850)</u>	<u>(8,700)</u>	
<u>Socialist countries of Asia</u>	<u>(5,600)</u>	<u>(5,000)</u>	<u>(6,000)</u>	<u>(7,000)</u>	<u>(7,800)</u>	<u>(8,500)</u>	<u>(12,500)</u>	<u>(15,500)</u>	<u>(15,500)</u>	<u>(15,500)</u>	

Source: UNCTAD secretariat, based on Quarterly Bulletin of Tungsten Statistics, Committee on Tungsten, various issues.

() Denotes estimates or apparent consumption.

a/ Provisional estimates.

Annex IV

Production of tungsten ores and concentrates, 1982-1992
(Metric tons of tungsten content)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992 a/
<u>World</u>	<u>47,079</u>	<u>40,849</u>	<u>48,591</u>	<u>47,241</u>	<u>42,267</u>	<u>40,992</u>	<u>50,582</u>	<u>48,221</u>	<u>43,025</u>	<u>35,926</u>	
of which:											
<u>Developed market-</u>											
<u>economy countries</u>	<u>12,254</u>	<u>8,117</u>	<u>11,970</u>	<u>11,390</u>	<u>9,030</u>	<u>4,323</u>	<u>5,187</u>	<u>5,106</u>	<u>4,727</u>	<u>3,182</u>	
Australia	2,588	2,061	1,733	1,970	1,572	1,152	1,261	(1,371)	1,087	238	
Austria	1,406	1,408	1,632	1,481	1,387	1,250	1,507	(1,500)	(1,500)	(1,400)	
Canada	2,938	328	3,715	3,005	1,273	-	-	-	-	-	
France	726	793	742	735	937	-	-	-	-	-	
Japan	804	474	477	568	579	259	266	286	254	270	
Portugal	1,359	1,182	1,509	1,766	1,657	1,209	1,381	1,376	1,404	(969)	
Spain	556	521	569	462	483	80	80	58	27	-	
Sweden	349	365	385	402	357	334	327	(80)	-	-	
United States	1,521	980	1,203	996	780	34	360	(400)	(450)	(300)	
Others	7	5	5	5	5	5	5	35	5	5	
<u>Developing countries</u>	<u>9,645</u>	<u>8,452</u>	<u>9,071</u>	<u>8,301</u>	<u>6,687</u>	<u>5,619</u>	<u>5,545</u>	<u>5,265</u>	<u>3,948</u>	<u>4,894</u>	
Bolivia	2,534	2,490	1,893	1,643	1,160	624	924	1,118	818	1,200	
Brazil	1,365	1,026	1,101	1,297	875	672	739	(790)	(420)	400	
Korea, Republic of	2,539	2,101	2,702	2,370	2,240	2,180	1,825	1,560	1,250	800	(500)
Mexico	78	147	145	282	294	213	206	170	183	194	
Myanmar, The Union of	844	930	1,096	945	715	493	450	464	300	300	
Peru	654	703	786	732	604	440	545	265	389	(1,000)	
Rwanda	322	231	291	167	13	11	3	110	156	200	
Thailand	856	563	742	585	512	702	651	648	290	650	
Other	453	261	315	280	274	284	202	140	142	150	
<u>Countries</u>											
<u>of Eastern Europe</u>	<u>(9,480)</u>	<u>(9,780)</u>	<u>(10,050)</u>	<u>(10,050)</u>	<u>(9,050)</u>	<u>(9,050)</u>	<u>(7,050)</u>	<u>(7,050)</u>	<u>(7,050)</u>	<u>(6,050)</u>	
<u>Socialist countries</u>											
<u>of Asia</u>	<u>(15,700)</u>	<u>(14,500)</u>	<u>(17,500)</u>	<u>(17,500)</u>	<u>(17,500)</u>	<u>(22,000)</u>	<u>(32,800)</u>	<u>(30,800)</u>	<u>(27,300)</u>	<u>(21,800)</u>	

Source: UNCTAD secretariat, Quarterly Bulletin of Tungsten Statistics, Committee on Tungsten, various issues.

a/ Provisional estimates.

() Denotes estimates.

Annex V

Tungsten stocks by type in selected countries, 1982-1991
(Metric tons of tungsten content)

	End of year									
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
A. Ores and concentrates										
<u>Producers' stocks</u>										
Australia	507	385	306	379	481	435	416	705	717	447
Bolivia	...	...	...	...	...	...	105	130	(210)	(200)
Brazil	-	17	17	17	875	...	70	(84)	-	-
France	139	159	76	85	205	65	-	-	-	-
India	21	11	32	54	50	50	57	10	11	15
Japan	211	32	39	27	26	21	41	72	75	101
Mexico	7	12	18	20	95	8	19	13	25	(18)
Peru	...	...	...	46	241	...	71	(54)	-	-
Portugal	380	370	251	305	1,042	941	970	1,057	1,180	279
Republic of Korea	338	76	231	200	44	45	(45)	-	-	-
Rwanda	30	40	48	...	(60)	10	10	10	22	20
Spain	...	75	114	84	50	62	47	45	20	-
Sweden	-	-	-	-	-	-	-	206	-	-
Thailand	793	834	804	1,029	1,025	1,100	1,295	1,487	1,553	1,700
Turkey	23	116	96	80	145	43	-	-	-	-
United Kingdom	73	-	-	-	-	-	-	-	-	-
United States	54	54	46	60	21	21	21	10	40	(20)
sub-total	2,576	2,181	2,078	2,386	4,360	2,801	3,167	3,883	3,853	2,800
<u>Consumers' stocks</u>										
Argentina	9	-	-	-	-	-	-	-	-	-
Canada	...	...	...	...	...	255	75	70	61	(60)
France	9	47	177	130	221	-	-	-	-	-
Japan	409	511	557	671	687	448	455	561	860	661
Republic of Korea	-	-	-	-	-	-	-	-	-	200
Portugal	3	5	3	10	1	-	1	1	1	(1)
Sweden	-	-	256	302	333	353	301	218	40	(40)
United States	1,765	1,085	959	1,077	502	329	499	1,261	1,077	1,778
sub-total	2,195	1,648	1,952	2,190	1,744	1,385	1,331	2,111	2,039	2,740
<u>Dealers' stocks</u>										
Argentina	23	11	9	9	-	-	-	-	-	-
Japan	-	11	-	1	-	-	-	-	-	-
Peru	-	-	-	-	-	-	7	7	27	27
Thailand	530	462	339	113	116	120	51	107	83	(83)
Sub-total	553	484	348	123	116	120	58	114	110	110
<u>Total</u> (as shown above)	<u>5,324</u>	<u>4,313</u>	<u>4,378</u>	<u>4,699</u>	<u>6,220</u>	<u>4,306</u>	<u>4,556</u>	<u>6,108</u>	<u>6,002</u>	<u>5,650</u>
B. Ammonium paratungstate										
United States a/	748	870	1,191	1,056	477	292	911	915	896	578

Source: UNCTAD, Quarterly Bulletin of Tungsten Statistics, Committee on Tungsten, various issues and the Bureau of Mines, the United States Department of the Interior.

a/ Consumers' and Producers' stocks only.

- Denotes negligible or nil. ... Denotes not available. () Provisional estimates.

Annex VII
An updated list of tungsten mining projects currently in the pipeline

Location	Project	Company(ies)	Capacity in tons W	Completion date	Remarks
Australia	Burnie (Tasmania)	Taminox/McIntyre	-	-	Project awaiting decision
Bolivia	Chicote Grande	Anschutz Mining	1 000 ^W	-	Project was due for completion in 1984-1985 but was shelved.
Brazil	Carajás	Ducargo (CVRD subsidiary)	100	-	Development under consideration.
Canada (Northwest Territories)	Mactung	Amax	1 000- 3 500	-	Originally commissioned for 1985 but postponed to 1987 and then further postponed; development awaiting market conditions to improve significantly.
France (Belfort)	Auxelles	Elf-Aquitaine/ Cominco	500	-	Deferred (originally due for completion in 1984).
India	Degana Rajasthan	Rajasthan Tungsten	200 ^W	-	Project at proposal stage in 1988 but no further progress has since been reported; ore grade reported 0.3 per cent WO ₃ .
	Almora	Uttar Pradesh Development Corp.	-	-	Reserves estimated at 10 m metric tons with an ore grade of 0.4 per cent tungsten content; a pilot plant reported to have been established in 1989 and commercial working could start within four to five years.
Peru	Altiplano	Minera Regina S.A.	680 ^W	1988-1989	Expansion project (production of concentrates to increase to 2,700 metric tons per year); the completion date may have been extended but part of this project may have come on stream recently.
South Africa (Cape Province)	Uptington	Shell	600 ^W	-	Completion date originally fixed for 1984 following a full-scale feasibility study after discovery of deposits in 1982; but the project has continued to be put in abeyance.
Spain (Salamanca)	Los Santos	Banco Bilbao/ Bilbiliton IV	500 ^g	-	High-grade deposits discovered in 1983 with reserves estimated at 1 m tons of ores grading 28 kg W per ton enough for 10 and 13 years' exploitation; developments awaiting improved market conditions.
(Almorázar)	La Parrilla	Banco Español de Crédito y Banco Crédito Industrial	1,500,000 ^W	-	Estimated resources 32 million metric tons containing 45,000 mt of WO ₃ ; initial investment estimated at 1582 m pesetas to a maximum of 3082 m pesetas; no activity recently reported.
Thailand	Dol Mek	Thai-Swedish Mining	340	-	Expansion project under consideration but put in abeyance due poor market conditions.
United Kingdom (Devon)	Hemerdon	Amax/Hemerdon Mining and Smelting	2 200	-	Planning permission was granted at the end of 1985 but development has been postponed.

Source: UNCTAD secretariat, based on annex VIII of TD/B/CN.1/TUNGSTEN/89 as revised, and information provided by direct contacts and a number of periodicals, including Mining Magazine and Engineering and Mining Journal, recent issues.

Note: The information provided in the list may not be complete; Committee members are invited to provide additional information which may be available to them for updating or completing this table.

^W Estimates by the UNCTAD secretariat. ^W Capacity refers to tons of ore per day. ^g Maximum estimate. ^g Capacity refers to tons of ore per year. - Denotes data not available.

Annex VIII

World exports and imports of tungsten ores and concentrates
1984-1991

(metric tons of tungsten content)

	1984	1985	1986	1987	1988	1989	1990	1991
<u>A. World Exports</u>	<u>26 621</u>	<u>27 092</u>	<u>23 892</u>	<u>22 957</u>	<u>24 360</u>	<u>25 906</u>	<u>16 874</u>	<u>12 702</u>
Developed market-economy countries	8 264	7 893	4 833	3 137	3 758	2 978	2 707	2 659
Developing countries	7 145	6 747	5 394	6 415	4 248	4 714	3 895	5 116
Socialist countries of Asia	11 212	12 452	13 665	13 405	16 354	18 214	10 272	4 927
<u>B. World Imports</u>	<u>26 931</u>	<u>25 136</u>	<u>20 899</u>	<u>19 889</u>	<u>23 614</u>	<u>23 617</u>	<u>17 674</u>	<u>13 422</u>
Developed market-economy countries	16 120	13 053	8 937	9 794	13 997	13 495	10 043	9 563
Developing countries	1 467	3 230	2 948	1 651	1 393	2 922	1 781	1 209
Countries of Eastern Europe	9 344	8 853	9 014	8 444	8 224	7 200	5 850	2 650
<u>C. Statistical balance (A-B)</u>	-310	+1 956	+2 993	+3 068	+746	+2 289	-800	-720

Source: UNCTAD secretariat, on the basis of Tungsten Statistics of the Committee on Tungsten.