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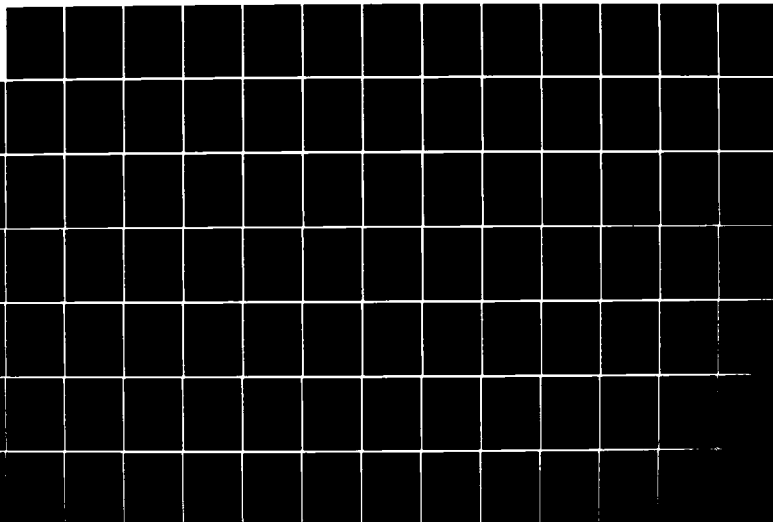
SIMULATION OF CRITICAL MATERIALS RESOURCE STRATEGIES
VOLUME 2 APPENDIX D. (U) TITAN SYSTEMS INC LA JOLLA CA
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EMW-C-0906

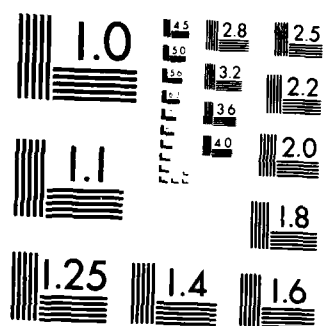
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TITAN-DSI-105800-07-83-5F

(11)

SIMULATION OF CRITICAL MATERIALS RESOURCE STRATEGIES

AD-A150 260

APPENDIX D - DATA BASE
VOLUME 2
THROUGH SCENARIO 23

FINAL REPORT

CONTRACT EMW-C-0906

ARTICLE III A

Submitted to:
Mr. Michael Pfetsch
FEMA

Program Manager
Donohoe Building, Room 617
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Washington, D.C. 20472

September 13, 1983

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19. SUPPLEMENTARY NOTES		
20. KEY WORDS (Continue on reverse side if necessary and identify by block number) Critical Material; Strategic Resources		
21. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report addresses preliminary efforts to quantify strategic relationships of materials to force elements. The results of the preliminary materials are emergency but requires further model development.		

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SCENARIO 12

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A-1	23



WEIGHTS on REGION by LEVEL of CONFLICT and MEDIA

Level of Conflict & Media 1

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	7.0	5.0	7.0	2.0	2.0	5.0	2.0	6.0
1/COEF	0.1786	0.1786	0.1250	0.0893	0.1250	0.0357	0.0357	0.0893	0.0357	0.1000

Level of Conflict & Media 2

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	9.0	4.0	7.0	5.0	1.0	8.0	7.0	5.0
1/COEF	0.1333	0.1333	0.1200	0.0533	0.0933	0.0667	0.0133	0.1067	0.0933	0.0667
1/COEF	0.1200									

Level of Conflict & Media 3

Region	1	2	3	4	5	6	7
Weight	10.0	10.0	10.0	8.0	6.0	4.0	8.0
1/COEF	0.1786	0.1786	0.1786	0.1429	0.1071	0.0714	0.1429

Level of Conflict & Media 4

Region	1	2	3	4
Weight	10.0	4.0	2.0	1.0
1/COEF	0.5882	0.2353	0.1176	0.0588

INFLUENCE COEFFICIENTS OVER ALL LEVEL OF CONFLICTS

on the Importance of Controlling EACH region within its own Media

Media 1	1	2	3	4	5	6	7	8	9	10
1/COEF	0.0228	0.0228	0.0160	0.0114	0.0160	0.0046	0.0046	0.0114	0.0046	0.0137

Media 2	1	2	3	4	5	6	7	8	9	10
1/COEF	0.0171	0.0171	0.0154	0.0063	0.0119	0.0085	0.0017	0.0136	0.0119	0.0085

Media 3	1	2	3	4	5	6	7
1/COEF	0.0228	0.0228	0.0228	0.0183	0.0137	0.0091	0.0133

Media 4	1	2	3	4
1/COEF	0.0752	0.0301	0.0150	0.0075

Importance of controlling ANY Region
within its Media as compared to the Importance
of controlling ANY Region of any other Media

Media 1	1	2	3	4	5	6	7	8	9	10
1/COEF	0.0099	0.0099	0.0070	0.0050	0.0070	0.0020	0.0020	0.0050	0.0020	0.0060

Media 2	1	2	3	4	5	6	7	8	9	10
1/COEF	0.0037	0.0037	0.0033	0.0015	0.0026	0.0019	0.0004	0.0030	0.0026	0.0019

Media 3	1	2	3	4	5	6	7
1/COEF	0.0060	0.0060	0.0060	0.0048	0.0036	0.0024	0.0048

Media 4	1	2	3	4
1/COEF	0.0065	0.0026	0.0013	0.0007

FORCE ELEMENT IMPORTANCE
(LOC 3)

RANKING	ELEMENT NUMBER	FORCE ELEMENT NAME	CALCULATED VALUE	NORMALIZED VALUE
1	17	CARRIER BATTLE GROUP	0.141	10.000
2	1	AIR INTERDICTION	0.117	8.261
3	3	ARMY GROUND	0.104	7.331
4	16	ATTACK SUBS	0.072	5.133
5	19	SURFACE COMBATANTS	0.060	4.249
6	12	THEATER NUCLER WEAPON	0.054	3.811
7	8	RAPID DEPLOY	0.052	3.704
8	6	CAS	0.044	3.131
9	14	ASW(LAND BASED)	0.043	3.083
10	22	AIR SUPERIORITY(LAND BASED)	0.041	2.913
11	15	ASW(SEA BASED)	0.033	2.315
12	23	AIR SUPERIORITY(SHIP BASED)	0.032	2.277
13	21	AIR DEFENSE(SHIP BASED)	0.029	2.065
14	10	STRATEGIC BOMBER	0.025	1.754
15	25	SPACE BASED WEAPON(AIR CNTRL)	0.020	1.416
16	29	ASAT(SPACE BASED)	0.013	0.914
17	18	MINE WARFARE	0.013	0.891
18	2	AMPHIBIOUS ASSAULT	0.011	0.757
19	13	SPECIAL OPERATIONS	0.010	0.725
20	28	ASAT(LAND BASED)	0.007	0.510
21	20	AIR DEFENSE(LAND BASED)	0.004	0.273
22	9	SPACE-BASED WEAPON(LND CNTRL)	0.003	0.213
23	30	SPACE BASED WEAPON(SEA CNTRL)	0.002	0.113
24	27	ABM(SPACE BASED)	0.000	0.000
25	26	ABM(LAND BASED)	0.000	0.000
26	24	INTERCEPTOR AIRCRAFT	0.000	0.000
27	11	SLBM	0.000	0.000
28	7	ICBM	0.000	0.000
29	5	CIVIL DEFENSE	0.000	0.000
30	4	CBW	0.000	0.000

COMMODITY IMPORTANCE
(LOC 3)

COBALT

AIR INTERDICTION	5.71
ARMY GROUND	4.52
CAS	1.75
ICBM	0.00
STRATEGIC BOMBER	1.79
SLBM	0.00
ASW(SEA BASED)	1.27
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.23
INTERCEPTOR AIRCRAFT	0.00
ASAT(LAND BASED)	0.51

	34.99

TIN

AIR INTERDICTION	5.40
ARMY GROUND	1.92
CAS	1.91
STRATEGIC BOMBER	1.79
ASW(LAND BASED)	3.08
ASW(SEA BASED)	1.11
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.91
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
	41.18

NICKEL

AIR INTERDICTION	5.60
ARMY GROUND	2.92
CAS	1.72
STRATEGIC BOMBER	1.79
ASW(SEA BASED)	1.71
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
	41.21

FLUORSPAR ACID

AIR INTERDICTION	7.13
AMPHIBIOUS ASSAULT	0.76
ARMY GROUND	3.69
CAS	2.05
ICBM	0.00
STRATEGIC BOMBER	1.79
SLBM	0.00
ASW(LAND BASED)	3.08
ASW(SEA BASED)	1.63
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
	39.57

PYRETHRUM

ARMY GROUND	2.68
CIVIL DEFENSE	0.00
ASW(SEA BASED)	0.14
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
	17.08

COMMODITY NORMALIZED IMPORTANCE

NICKEL	10.00	(41.21)
TIN	9.99	(41.18)
FLUORSPAR ACID	9.60	(39.57)
COBALT	8.49	(34.99)
PYRETHRUM	4.14	(17.08)

COBALT		
A-10	CAS	72.7336
COBRA	CAS	48.4691
F-4	AIR INTERDICTION	109.5000
	CAS	7.2734
F-16	AIR INTERDICTION	71.8785
	CAS	40.4075
ART. ACFT	CAS	3.6367
RADIO RLY	AIR INTERDICTION	3.2345
	CAS	2.7275
F-111	AIR INTERDICTION	129.3813
A-6	AIR INTERDICTION	38.8144
F-15	AIR INTERDICTION	57.5023
A-7	AIR INTERDICTION	51.7525
F-14	AIR INTERDICTION	43.1571
F-18	AIR INTERDICTION	71.8785
SH-3	ASW(SEA BASED)	6.0775
SH-2	ASW(SEA BASED)	15.1937
SH-60B	ASW(SEA BASED)	23.6346
S-3	ASW(SEA BASED)	34.7284
ATT. SUBS	ASW(SEA BASED)	24.1169
FRIGATES	ASW(SEA BASED)	14.4701
DESTROYERS	ASW(SEA BASED)	8.6821
M-48	ARMY GROUND	37.9669
M-60	ARMY GROUND	61.0182
M-1	ARMY GROUND	67.7980
M-551	ARMY GROUND	0.2260
M-901	ARMY GROUND	54.2384
M-2/M-3	ARMY GROUND	47.4504
M-113	ARMY GROUND	5.2732
MLRS	ARMY GROUND	20.3394
TOWED ART.	ARMY GROUND	27.1192
SELF-PROP.	ARMY GROUND	36.1589
PERSHING	ARMY GROUND	18.0795
GLCMs	ARMY GROUND	30.1324
INFANTRY	ARMY GROUND	7.5331
MORTERS	ARMY GROUND	36.9122
ROLES LNCH	ARMY GROUND	1.5820

NORMALIZED VALUES	
F-111	10.0000
F-16	8.4787
F-4	8.5622
A-10	5.6216
F-18	5.5556
M-1	5.2402
M-60	4.7162
F-15	4.4444
M-901	4.1921
A-7	4.0000
COBRA	3.7478
M-2/M-3	3.6681
F-14	3.3333
A-6	3.0000
M-48	2.9345
MORTERS	2.8530
SELF-PROP.	2.7948
S-3	2.6842
GLCMs	2.3290
TOWED ART.	2.0961
ATT. SUBS	1.8640
SH-60B	1.8267
MLRS	1.5721
PERSHING	1.3974
SH-2	1.1743
FRIGATES	1.1181
DESTROYERS	0.6710
INFANTRY	0.5832
SH-3	0.4697
RADIO RLY	0.4603
M-113	0.4076
ART. ACFT	0.2811
ROLES LNCH	0.1223
M-551	0.0175

TIN		
A-10	CAS	72.7334
COBRA	CAS	64.6521
F-4	AIR INTERDICTION	103.5050
	CAS	7.2934
F-16	AIR INTERDICTION	71.8785
	CAS	40.4075
ART. ACFT	CAS	3.4367
RADIO RLAY	AIR INTERDICTION	3.2343
	CAS	2.7275
F-111	AIR INTERDICTION	129.3913
A-6	AIR INTERDICTION	48.6662
F-15	AIR INTERDICTION	57.0023
A-7	AIR INTERDICTION	51.7525
F-14	AIR INTERDICTION	49.5190
F-18	AIR INTERDICTION	80.8433
SH-3	ASW(SEA BASED)	5.2093
SH-2	ASW(SEA BASED)	13.0231
SH-60B	ASW(SEA BASED)	20.2582
S-3	ASW(SEA BASED)	34.7294
ATT. SUBS	ASW(SEA BASED)	14.4701
FRIGATES	ASW(SEA BASED)	14.4701
DESTROYERS	ASW(SEA BASED)	8.6821
M-48	ARMY GROUND	4.2185
M-60	ARMY GROUND	6.7793
M-1	ARMY GROUND	37.6655
M-551	ARMY GROUND	0.0713
M-901	ARMY GROUND	6.7793
M-2/M-3	ARMY GROUND	6.7793
M-113	ARMY GROUND	0.7533
MLRS	ARMY GROUND	10.1697
TOWED ART.	ARMY GROUND	4.5199
SELF-PROP.	ARMY GROUND	6.0263
PERSHING	ARMY GROUND	15.8195
GLCMs	ARMY GROUND	26.3637
INFANTRY	ARMY GROUND	60.2649
MORTERS	ARMY GROUND	5.2732
ROLES LNCH	ARMY GROUND	0.2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
F-18	6.2500
A-10	5.6216
COBRA	4.9970
INFANTRY	4.6379
F-15	4.4444
A-7	4.0000
F-14	3.7500
A-6	3.3750
M-1	2.9112
S-3	2.6842
GLCMs	2.0373
SH-60B	1.5658
PERSHING	1.2227
FRIGATES	1.1184
ATT. SUBS	1.1184
SH-2	1.0066
MLRS	0.7860
DESTROYERS	0.6710
M-2/M-3	0.5240
M-901	0.5240
M-60	0.5240
SELF-PROP.	0.4658
RADIO RLAY	0.4603
MORTERS	0.4076
SH-3	0.4026
TOWED ART.	0.3493
M-48	0.3261
ART. ACFT	0.2811
M-113	0.0732
ROLES LNCH	0.0175
F-111	0.0000

NICKEL		
A-10	CAS	72 7386
COBRA	CAS	43 4871
F-4	AIR INTERDICTION	77 6288
	CAS	5 4950
F-16	AIR INTERDICTION	71 8785
	CAS	40 4073
ART. ACFT	CAS	2 4245
RADIO RLY	AIR INTERDICTION	3 2345
	CAS	2 7275
F-111	AIR INTERDICTION	129 3813
A-6	AIR INTERDICTION	32 8144
F-15	AIR INTERDICTION	57 5023
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	43 5180
F-18	AIR INTERDICTION	80 8633
SH-3	ASW(SEA BASED)	8 9457
SH-2	ASW(SEA BASED)	17 3642
SH-60B	ASW(SEA BASED)	27 0109
S-3	ASW(SEA BASED)	34 7284
ATT. SUBS	ASW(SEA BASED)	43 4104
FRIGATES	ASW(SEA BASED)	26 0463
DSTROYERS	ASW(SEA BASED)	15 6273
M-48	ARMY GROUND	42 1854
M-60	ARMY GROUND	67 7980
M-1	ARMY GROUND	75 3311
M-551	ARMY GROUND	0 7533
M-901	ARMY GROUND	47 4586
M-2/M-3	ARMY GROUND	54 2384
M-113	ARMY GROUND	5 2732
MLRS	ARMY GROUND	20 3394
TOWED ART.	ARMY GROUND	36 1589
SELF-PROP.	ARMY GROUND	48 2119
PERSHING	ARMY GROUND	18 0795
GLCMs	ARMY GROUND	22 5993
INFANTRY	ARMY GROUND	37 6655
MORTERS	ARMY GROUND	15 8193
ROLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10 0000
F-16	8 6737
F-4	6 4216
F-15	6 2500
M-1	5 8224
A-10	5 6216
M-60	5 2402
F-15	4 4444
M-2/M-3	4 1921
A-7	4 0000
F-14	3 7500
COBRA	3 7473
SELF-PROP.	3 7263
M-901	3 6681
ATT. SUBS	3 3532
M-48	3 2605
A-6	3 0000
INFANTRY	2 9112
TOWED ART.	2 7948
S-3	2 6842
SH-60B	2 0877
FRIGATES	2 0141
GLCMs	1 7447
MLRS	1 5711
PERSHING	1 3974
SH-2	1 3421
MORTERS	1 2227
DSTROYERS	1 2079
SH-3	0 9348
RADIO RLY	0 4608
M-113	0 4076
ART. ACFT	0 1814
M-551	0 0642
ROLES LNCH	0 0101

FLUORSPAR ACID		
A-10	CAS	90.9170
COBRA	CAS	48.4591
F-4	AIR INTERDICTION	129.3813
	CAS	9.0917
F-16	AIR INTERDICTION	89.8491
	CAS	50.5034
ART. ACFT	CAS	3.6367
RADIO RLY	AIR INTERDICTION	3.2343
	CAS	2.7275
F-111	AIR INTERDICTION	161.7246
A-6	AIR INTERDICTION	49.5180
F-15	AIR INTERDICTION	71.8783
A-7	AIR INTERDICTION	64.6906
F-14	AIR INTERDICTION	53.9017
F-18	AIR INTERDICTION	89.8491
SH-3	ASW(SEA BASED)	6.9457
SH-2	ASW(SEA BASED)	17.3642
SH-60B	ASW(SEA BASED)	22.7637
S-3	ASW(SEA BASED)	43.4104
ATT. SUBS	ASW(SEA BASED)	23.9400
FRIGATES	ASW(SEA BASED)	20.2582
DESTROYERS	ASW(SEA BASED)	12.1549
M-48	ARMY GROUND	12.6556
M-60	ARMY GROUND	20.3394
M-1	ARMY GROUND	22.5993
M-551	ARMY GROUND	0.2260
M-901	ARMY GROUND	54.2384
M-2/M-3	ARMY GROUND	54.2384
M-113	ARMY GROUND	6.0265
MLRS	ARMY GROUND	16.9495
TOWED ART.	ARMY GROUND	22.5993
SELF-PROP.	ARMY GROUND	30.1374
PERSHING	ARMY GROUND	15.8195
GLCMS	ARMY GROUND	26.3659
INFANTRY	ARMY GROUND	60.2649
MORTERS	ARMY GROUND	26.3659
COLES LNCH	ARMY GROUND	0.2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6216
F-18	5.5554
F-15	4.4444
A-7	4.0000
INFANTRY	3.7263
M-2/M-3	3.3537
M-901	3.3537
F-14	3.3333
A-6	3.0000
COBRA	2.9982
S-3	2.6842
SH-60B	2.0877
SELF-PROP.	1.8632
ATT. SUBS	1.7895
MORTERS	1.6303
GLCMS	1.6303
TOWED ART.	1.3974
M-1	1.3974
M-60	1.2576
FRIGATES	1.2526
SH-2	1.0737
MLRS	1.0480
PERSHING	0.9782
M-48	0.7825
DESTROYERS	0.7516
SH-3	0.4295
M-113	0.3717
RADIO RLY	0.3636
ART. ACFT	0.2709
COLES LNCH	0.0140
M-551	0.0140

PYRETHRUM

ATT. SUBS	ASW (SEA BASED)	14.4701
M-48	ARMY GROUND	23.5053
M-60	ARMY GROUND	47.4566
M-113	ARMY GROUND	5.2732
TOWED ART.	ARMY GROUND	31.6390
SELF-PROP.	ARMY GROUND	42.1854
INFANTRY	ARMY GROUND	75.9311
MORTERS	ARMY GROUND	36.9122

NORMALIZED VALUES

INFANTRY	10.0000
M-60	6.3000
SELF-PROP.	5.6000
MORTERS	4.9000
TOWED ART.	4.2000
M-48	3.9200
ATT. SUBS	1.9209
M-113	0.7000

ALL COMMODITIES

A-10	CAS	3.0912
COBRA	CAS	2.1012
F-4	AIR INTERDICTION	4.1452
	CAS	0.2909
F-16	AIR INTERDICTION	3.0548
	CAS	1.7173
ART. ACFT	CAS	0.1333
RADIO RLY	AIR INTERDICTION	0.1294
	CAS	0.1091
F-111	AIR INTERDICTION	5.4867
A-6	AIR INTERDICTION	1.6981
F-15	AIR INTERDICTION	2.4439
A-7	AIR INTERDICTION	2.1995
F-14	AIR INTERDICTION	1.9407
F-18	AIR INTERDICTION	3.2345
SH-3	ASW(SEA BASED)	0.2518
SH-2	ASW(SEA BASED)	0.6295
SH-60B	ASW(SEA BASED)	1.0447
S-3	ASW(SEA BASED)	1.4760
ATT. SUBS	ASW(SEA BASED)	1.2541
FRIGATES	ASW(SEA BASED)	0.7524
DSTROYERS	ASW(SEA BASED)	0.4515
M-48	ARMY GROUND	1.2656
M-60	ARMY GROUND	2.0339
M-1	ARMY GROUND	2.0339
M-551	ARMY GROUND	0.0123
M-901	ARMY GROUND	1.6272
M-2/M-3	ARMY GROUND	1.6272
M-113	ARMY GROUND	0.2260
MLRS	ARMY GROUND	0.6780
TOWED ART.	ARMY GROUND	1.2204
SELF-PROP.	ARMY GROUND	1.6272
PERSHING	ARMY GROUND	0.6780
GLCMS	ARMY GROUND	1.0546
INFANTRY	ARMY GROUND	2.4106
MORTERS	ARMY GROUND	1.2128
ROLES LNCH	ARMY GROUND	0.0226

NORMALIZED VALUES

F-111	10.0000
F-16	8.6787
F-4	8.0585
F-18	5.8824
A-10	5.6216
F-15	4.4444
INFANTRY	4.3839
A-7	4.0000
COBRA	3.8213
M-1	3.6999
M-60	3.6989
F-14	3.5294
A-6	3.0882
SELF-PROP.	2.9592
M-2/M-3	2.9592
M-901	2.9592
S-3	2.6842
M-48	2.3016
ATT. SUBS	2.2807
TOWED ART.	2.2194
MORTERS	2.2077
GLCMS	1.8100
SH-60B	1.9095
FRIGATES	1.3624
PERSHING	1.2330
MLRS	1.2330
SH-2	1.1447
DSTROYERS	0.8210
SH-3	0.4179
RADIO RLY	0.4317
M-113	0.4110
ART. ACFT	0.3424
ROLES LNCH	0.0211
M-551	0.0000

CRITICALITY OF SHORTFALL
ALL FEES
(LOC 3)

COMMODITY	GOAL (UNITS)	STOCK PILE (UNITS)	SHORT FALL (%)	TRAIL- LATED	FEES COMMODITY IMPORT.	CRITIC- ALITY	FEES TRAIL- LATED
BALT	80.4	43.8	-49.7	402.5	8.5	3418.1	7.8
IN	42.0	186.4	35.8	0.0	10.0	0.0	0.0
ICHEL	200.0	32.0	-8.0	437.7	10.0	4377.1	10.0
DIORSFAR ACID	1400.0	845.0	-36.1	389.9	9.6	3744.3	8.1
RETHRUM	500.0	0.0	-100.0	439.8	4.1	1880.7	4.0

COMPOSITE IMPORTANCE
(LOC 3)

COBALT

	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	%(1/CI)
CURCE	1350.	7.71	1.92	0.520	4.613
INLAND	450.	2.57	1.50	0.667	1.715
ROCCO	250.	1.43	0.71	1.404	2.905
OTSWANNA	100.	0.56	1.19	0.841	0.701
OUTH AFRICA	9000.	51.43	0.71	1.404	71.180
IRE	3500.	20.00	0.71	1.404	28.000
AMBIA	50.	0.28	0.92	1.087	0.010
ILIPPINES	400.	2.27	0.92	1.087	2.413
ESTRALIA	250.	1.43	0.92	1.087	1.553
EW CALEDONIA	1100.	6.29	2.89	0.346	2.175
ANADA	1000.	5.71	2.56	0.391	2.234
S					
TOTAL	17500.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

TIN

	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	%(1/CI)
CURCE	100.	0.15	0.92	1.087	0.161
USTRALIA	16100.	23.82	2.56	0.391	9.319
S	5900.	8.73	0.92	1.087	9.483
AILAND	5800.	8.58	0.92	1.087	9.323
NDONESIA	100.	0.15	1.96	0.510	0.075
LIVIA	10300.	15.24	0.98	1.020	15.549
RAZIL	2400.	3.55	0.86	1.162	4.125
RC	3000.	4.44	2.47	0.405	1.796
LAYSIA	23900.	35.36	0.92	1.087	38.414
TOTAL:	67600.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1000.	0.33	1.92	0.520	0.171
SOUTH AFRICA	5000	1.64	1.19	0.841	1.381
PHILIPPINES	5000	1.64	0.92	1.087	1.780
AUSTRALIA	25000	8.21	0.92	1.087	0.924
CANADA	150000	49.28	2.89	0.346	19.050
USSR	88000.	28.91	2.56	0.391	11.311
GREECE	600	0.20	1.96	0.510	0.101
NETHERLANDS	200.	0.07	1.96	0.510	0.034
FRG	100	0.03	1.96	0.510	0.017
YUGOSLAVIA	500	0.16	1.96	0.510	0.034
USSR	5000.	1.64	0.94	1.041	1.742
DEM. REPUB.	15000	4.93	1.53	0.656	2.030
GUATEMALA	4000	1.31	1.53	0.656	0.851
INDONESIA	5000.	1.64	0.92	1.087	1.780
TOTAL:	304400.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

FLUOREPAR ACID

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	180.	22.36	1.19	0.841	18.801
USSR	70.	8.70	2.56	0.391	3.401
ITALY	65.	8.07	1.96	0.510	4.120
SPAIN	100.	12.42	1.96	0.510	6.936
EAST AFRICA	23.	3.11	0.71	1.404	4.359
THAILAND	15.	1.86	0.92	1.087	2.020
MEXICO	350.	43.48	2.56	0.391	17.011
TOTAL:	805.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

PYRETHRUM

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	2000.	1.01	1.19	0.841	0.852
AUSTRALIA	1500.	0.76	0.92	1.087	0.820
FRG	11000.	5.57	1.96	0.510	2.847
KENYA	80000.	40.51	0.71	1.404	54.805
RWANDA	25000.	12.66	0.71	1.404	17.767
TANZANIA	78000.	39.49	0.71	1.404	55.488
TOTAL:	197500.	100.00			

SOURCE IMPORTANCE
(LDC 3)

SOURCE	% (1/01) CUM. IMP	FE/SHORTFALL CRITICALITY	TOTAL	NORMALIZED TO 100
COBALT				
FINLAND	4.012	7.81	31.33	5.56
MOROCCO	1.715	7.81	13.40	2.33
BOTSWANNA	2.005	7.81	15.66	2.78
SOUTH AFRICA	0.721	7.81	5.63	1.00
ZAIRE	72.185	7.81	563.70	100.00
ZAMBIA	25.072	7.81	219.22	38.99
PHILIPPINES	0.310	7.81	2.42	0.43
AUSTRALIA	2.488	7.81	19.38	3.44
NEW CALEDONIA	1.552	7.81	12.12	2.15
CANADA	2.175	7.81	16.99	3.01
U.S.	2.234	7.81	17.41	3.10
TIN				
AUSTRALIA	0.161	0.00	0.00	0.00
U.S.	9.319	0.00	0.00	0.00
THAILAND	9.483	0.00	0.00	0.00
INDONESIA	9.322	0.00	0.00	0.00
UK	0.075	0.00	0.00	0.00
BOLIVIA	13.542	0.00	0.00	0.00
BRAZIL	4.125	0.00	0.00	0.00
PRC	1.792	0.00	0.00	0.00
MALAYSIA	39.414	0.00	0.00	0.00
NICKEL				
FINLAND	0.171	10.00	1.71	0.30
SOUTH AFRICA	1.381	10.00	13.81	2.40
PHILIPPINES	1.785	10.00	17.85	3.17
AUSTRALIA	8.924	10.00	89.24	15.80
CANADA	17.054	10.00	170.54	30.25
U.S.	11.311	10.00	113.11	20.07
GEORGE	0.101	10.00	1.01	0.18
N. HOLLANDS	0.034	10.00	0.34	0.06
PRC	0.017	10.00	0.17	0.03
YUGOSLAVIA	0.084	10.00	0.84	0.15
USSR	1.742	10.00	17.42	3.09
DOM. REPUB.	3.230	10.00	32.30	5.73
GUATAMALA	0.861	10.00	8.61	1.53
INDONESIA	1.785	10.00	17.85	3.17
FLUORSPAR ACID				
SOUTH AFRICA	18.803	8.55	160.85	28.53
U.S.	3.402	8.55	29.10	5.16
ITALY	4.120	8.55	35.24	6.25
SPAIN	6.338	8.55	54.22	9.62
EAST AFRICA	4.359	8.55	37.29	6.61
THAILAND	2.025	8.55	17.32	3.07
MEXICO	17.011	8.55	145.52	25.82
URETHRUM				
SOUTH AFRICA	0.852	4.30	3.66	0.65
AUSTRALIA	0.825	4.30	3.55	0.63
UK	2.842	4.30	12.21	2.17
KENYA	56.855	4.30	244.29	43.34
RWANDA	17.767	4.30	76.34	13.54
TANZANIA	55.433	4.30	238.18	42.23

SOURCE IMPORTANCE
RANKED BY SOURCE
(LOC 3)

#	SOURCE	COMMODITY	VALUE
1	ZAIRE	COBALT	100.00
2	KENYA	PYRETHRUM	43.34
3	TANZANIA	PYRETHRUM	42.25
4	ZAMBIA	COBALT	38.89
5	CANADA	NICKEL	30.25
6	SOUTH AFRICA	FLUORSPAR ACID	28.53
7	MEXICO	FLUORSPAR ACID	25.82
8	U S	NICKEL	20.07
9	AUSTRALIA	NICKEL	15.83
10	RWANDA	PYRETHRUM	13.54
11	SPAIN	FLUORSPAR ACID	9.62
12	EAST AFRICA	FLUORSPAR ACID	6.41
13	ITALY	FLUORSPAR ACID	6.25
14	DOM. REPUB.	NICKEL	5.73
15	FINLAND	COBALT	5.56
16	U S	FLUORSPAR ACID	5.14
17	AUSTRALIA	COBALT	3.44
18	INDONESIA	NICKEL	3.17
19	PHILIPPINES	NICKEL	3.17
20	U S	COBALT	3.10
21	USSR	NICKEL	3.09
22	THAILAND	FLUORSPAR ACID	3.07
23	CANADA	COBALT	3.01
24	BOTSWANNA	COBALT	2.78
25	SOUTH AFRICA	NICKEL	2.45
26	MOROCCO	COBALT	2.34
27	UK	PYRETHRUM	2.17
28	NEW CALEDONIA	COBALT	2.15
29	GUATEMALA	NICKEL	1.53
30	SOUTH AFRICA	COBALT	1.00
31	SOUTH AFRICA	PYRETHRUM	0.65
32	AUSTRALIA	PYRETHRUM	0.41
33	PHILIPPINES	COBALT	0.43
34	FINLAND	NICKEL	0.30
35	GREECE	NICKEL	0.18
36	YUGOSLAVIA	NICKEL	0.15
37	NETHERLANDS	NICKEL	0.06
38	FRG	NICKEL	0.03
39	MALAYSIA	TIN	0.00
40	PRC	TIN	0.00
41	BRAZIL	TIN	0.00
42	BOLIVIA	TIN	0.00
43	UK	TIN	0.00
44	INDONESIA	TIN	0.00
45	THAILAND	TIN	0.00
46	U S	TIN	0.00
47	AUSTRALIA	TIN	0.00

SCENARIO 13

WEIGHTS on REGION by LEVEL of CONFLICT and MEDIA

Level of Conflict 3 Media 1

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	7.0	5.0	7.0	2.0	2.0	5.0	2.0	1.0
I/CDEF	0.1786	0.1786	0.1250	0.0893	0.1250	0.0357	0.0357	0.0943	0.0357	0.1071

Level of Conflict 3 Media 2

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	9.0	4.0	7.0	5.0	1.0	8.0	7.0	1.0
Weight	9.0									
I/CDEF	0.1333	0.1333	0.1200	0.0533	0.0933	0.0467	0.0133	0.1067	0.0911	0.0077
I/CDEF	0.1200									

Level of Conflict 3 Media 3

Region	1	2	3	4	5	6	7
Weight	10.0	10.0	10.0	8.0	6.0	4.0	3.0
I/CDEF	0.1786	0.1786	0.1786	0.1429	0.1071	0.0714	0.1429

Level of Conflict 3 Media 4

Region	1	2	3	4
Weight	10.0	4.0	2.0	1.0
I/CDEF	0.5882	0.2303	0.1176	0.0588

INFLUENCE COEFFICIENTS OVER ALL LEVEL OF CONFLICTS

on the Importance of Controlling EACH region within its own Media

Media 1	1	2	3	4	5	6	7	8	9	10
I/CDEF	0.0228	0.0128	0.0160	0.0114	0.0160	0.0048	0.0048	0.0114	0.0048	0.0117

Media 2	1	2	3	4	5	6	7	8	9	10
Region										
Media 11										

Region	1	2	3	4	5	6	7	8	9	10
I/CDEF	0.0171	0.0171	0.0154	0.0068	0.0119	0.0085	0.0017	0.0136	0.0119	0.0015
I/CDEF	0.0154									

Media 3	1	2	3	4	5	6	7
I/CDEF	0.0228	0.0228	0.0228	0.0183	0.0137	0.0091	0.0183

Media 4	1	2	3	4
I/CDEF	0.0752	0.0301	0.0150	0.0075

Importance of controlling ANY Region within its Media as compared to the Importance of controlling ANY Region of any other Media

Media 1	1	2	3	4	5	6	7	8	9	10
I/CDEF	0.0099	0.0099	0.0070	0.0050	0.0070	0.0020	0.0020	0.0050	0.0020	0.0060

Media 2	1	2	3	4	5	6	7	8	9	10
Region										
Media 11										

Region	1	2	3	4	5	6	7	8	9	10
I/CDEF	0.0037	0.0037	0.0033	0.0015	0.0026	0.0019	0.0004	0.0030	0.0026	0.0019
I/CDEF	0.0033									

Media 3	1	2	3	4	5	6	7
I/CDEF	0.0060	0.0060	0.0060	0.0048	0.0036	0.0024	0.0048

Media 4	1	2	3	4
I/CDEF	0.0065	0.0026	0.0013	0.0007

FORCE ELEMENT IMPORTANCE
(LOC 3)

RANKING	ELEMENT NUMBER	FORCE ELEMENT NAME	CALCULATED VALUE	NORMALIZED VALUE
1	17	CARRIER BATTLE GROUP	0.141	10.000
2	1	AIR INTERDICTION	0.117	8.260
3	3	ARMY GROUND	0.104	7.382
4	16	ATTACK SUB	0.072	5.130
5	14	SURFACE COMBATANTS	0.060	4.240
6	12	THEATER NUCLEAR WEAPON	0.054	3.810
7	8	RAPID DEPLOY	0.052	3.700
8	6	CAS	0.044	3.132
9	14	ASW(LAND BASED)	0.043	3.083
10	22	AIR SUPERIORITY(LAND BASED)	0.041	2.910
11	15	ARMY(SEA BASED)	0.033	2.315
12	23	AIR SUPERIORITY(SHIP BASED)	0.032	2.273
13	21	AIR DEFENSE(SHIP BASED)	0.029	2.065
14	10	STRATEGIC BOMBER	0.025	1.744
15	25	SPEE BASED WEAPON(AIR CNTRL)	0.020	1.416
16	29	ASAT(SPACE BASED)	0.011	0.824
17	18	MINE WARFARE	0.013	0.891
18	2	AMPHIBIOUS ASSAULT	0.011	0.777
19	13	SPECIAL OPERATIONS	0.010	0.725
20	28	ASAT(LAND BASED)	0.007	0.517
21	20	AIR DEFENSE(LAND BASED)	0.004	0.273
22	9	SPEE-BASED WEAPON(LND CNTRL)	0.003	0.212
23	30	SPEE BASED WEAPON(SEA CNTRL)	0.002	0.118
24	27	ARM(SPACE BASED)	0.000	0.000
25	26	ARM(LAND BASED)	0.000	0.000
26	24	INTERCEPTOR AIRCRAFT	0.000	0.000
27	11	SLBM	0.000	0.000
28	7	ICBM	0.000	0.000
29	5	CIVIL DEFENSE	0.000	0.000
30	4	CBW	0.000	0.000

COMMUNITY IMPORTANCE
(LOC 3)

COBALT

AIR INTERDICTION	5.71
ARMY GROUND	4.52
CAS	1.75
ICBM	0.00
STRATEGIC BOMBER	1.74
SLBM	0.00
ASW(SEA BASED)	1.27
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ASAT(LAND BASED)	0.51

54.99

TIN

AIR INTERDICTION	5.00
ARMY GROUND	1.92
CAS	1.91
STRATEGIC BOMBER	1.79
ASW(LAND BASED)	3.08
ASW(SEA BASED)	1.11
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.20
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
	41.15

NICKEL

AIR INTERDICTION	5.60
ARMY GROUND	4.92
CAS	1.72
STRATEGIC BOMBER	1.79
ASW(SEA BASED)	1.71
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.20
INTERCEPTOR AIRCRAFT	0.00
	41.21

FLUORSPAR ACID

AIR INTERDICTION	7.13
AMPHIBIOUS ASSAULT	0.76
ARMY GROUND	3.69
CAS	2.05
ICBM	0.00
STRATEGIC BOMBER	1.79
SLBM	0.00
ASW(LAND BASED)	3.08
ASW(SEA BASED)	1.63
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.20
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
	50.57

----- PYRETHRUM

ARMY GROUND	2.42
CIVIL DEFENSE	0.00
ASW(SEA BASED)	0.14
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25

17.08

COMMODITY NORMALIZED IMPORTANCE

NICKEL	10.00	(41.21)
TIN	9.99	(41.18)
FLUORSEAR ACID	9.60	(39.57)
COBALT	8.42	(34.99)
PYRETHRUM	4.14	(17.08)

COBALT		
A-10	CAS	72 7336
COBRA	CAS	48 4841
F-4	AIR INTERDICTION	103 5110
	UNL	7 2734
F-16	AIR INTERDICTION	71 8785
	CAS	41 4076
ART. ACFT	CAS	2 6867
RADIO RELAY	AIR INTERDICTION	3 2345
	CAS	2 7275
F-111	AIR INTERDICTION	129 3813
A-6	AIR INTERDICTION	38 8144
F-15	AIR INTERDICTION	57 5018
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	43 1271
F-18	AIR INTERDICTION	71 8785
SH-3	ASW(SEA BASED)	6 0775
SH-2	ASW(SEA BASED)	15 1937
SH-60B	ASW(SEA BASED)	23 6346
S-3	ASW(SEA BASED)	34 7244
ATT. SUBS	ASW(SEA BASED)	24 1145
FRIGATES	ASW(SEA BASED)	14 4701
DESTROYERS	ASW(SEA BASED)	8 6821
M-48	ARMY GROUND	37 9669
M-60	ARMY GROUND	61 0182
M-1	ARMY GROUND	67 7980
M-551	ARMY GROUND	0 2155
M-901	ARMY GROUND	54 2884
M-2/M-3	ARMY GROUND	47 4586
M-113	ARMY GROUND	5 2732
MLRS	ARMY GROUND	20 3374
TOWED ART.	ARMY GROUND	27 1192
SELF-PROP.	ARMY GROUND	36 1587
PERSHING	ARMY GROUND	18 0790
GLCS	ARMY GROUND	30 1324
INFANTRY	ARMY GROUND	7 5331
MORTARS	ARMY GROUND	36 9122
ROLES LNH	ARMY GROUND	1 5820

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6216
F-18	5.5556
M-1	5.2402
M-60	4.7162
F-15	4.4444
M-901	4.1921
A-7	4.0000
COBRA	3.7478
M-2/M-3	3.6681
F-14	3.3333
A-6	3.0000
M-48	2.9345
MORTARS	2.8530
SELF-PROP.	2.7948
S-3	2.6842
GLCS	2.3220
TOWED ART.	2.0961
ATT. SUBS	1.8640
SH-60B	1.8267
MLRS	1.5721
PERSHING	1.3974
SH-2	1.1743
FRIGATES	1.1184
DESTROYERS	0.6710
INFANTRY	0.5822
S-3	0.4607
RADIO RELAY	0.4609
M-113	0.4076
ART. ACFT	0.3311
ROLES LNH	0.1723
M-1	0.0155

TIN		
A-10	CAS	72 7331
LIBRA	CAS	69 4511
F-4	AIR INTERDICTION	103 5050
	CAS	7 2734
F-16	AIR INTERDICTION	71 3735
	CAS	40 4075
ART. ACFT	CAS	3 6367
RADIO RLY	AIR INTERDICTION	3 2345
	CAS	2 7175
F-111	AIR INTERDICTION	123 3813
A-6	AIR INTERDICTION	43 6662
F-15	AIR INTERDICTION	57 5023
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	48 5180
F-18	AIR INTERDICTION	80 8613
SH-3	ASW (SEA BASED)	5 2093
SH-2	ASW (SEA BASED)	13 0231
SH-60B	ASW (SEA BASED)	20 2582
S-3	ASW (SEA BASED)	34 7184
ATT. SUBS	ASW (SEA BASED)	14 4701
FRIGATES	ASW (SEA BASED)	14 4701
DESTROYERS	ASW (SEA BASED)	8 6811
M-43	ARMY GROUND	4 2185
M-60	ARMY GROUND	6 7773
M-1	ARMY GROUND	37 6435
M-551	ARMY GROUND	0 0713
M-901	ARMY GROUND	6 7798
M-2/M-3	ARMY GROUND	6 7798
M-113	ARMY GROUND	0 7533
MLRS	ARMY GROUND	10 1697
TOWED ART.	ARMY GROUND	4 5199
SELF-PROP.	ARMY GROUND	4 0243
PERSHING	ARMY GROUND	15 8195
GLCMS	ARMY GROUND	26 3659
INFANTRY	ARMY GROUND	60 2649
MORTERS	ARMY GROUND	5 2732
ROLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10 0000
F-16	8 6787
F-4	8 5622
F-18	6 2500
A-10	5 6216
COBRA	4 9970
INFANTRY	4 6579
F-15	4 4444
A-7	4 0000
F-14	3 7500
A-6	3 3750
M-1	2 9112
S-3	2 6842
GLCMS	2 0373
SH-60B	1 5658
PERSHING	1 2227
FRIGATES	1 1184
ATT. SUBS	1 1184
SH-2	1 0066
MLRS	0 7860
DESTROYERS	0 6710
M-2/M-3	0 5240
M-901	0 5240
M-60	0 5240
SELF-PROP.	0 4673
RADIO RLY	0 4403
MORTERS	0 4076
SH-3	0 4076
TOWED ART.	0 3473
M-43	0 3261
ART. ACFT	0 2911
M-113	0 0932
ROLES LNCH	0 0175
M-1	0 0000

NICKEL		
A-10	CAS	72.7316
CODRA	CAS	49.4841
F-4	AIR INTERDICTION	77.6215
	CAS	5.4500
F-16	AIR INTERDICTION	71.8785
	CAS	40.4071
ART. ACFT	CAS	2.4240
RADIO RELAY	AIR INTERDICTION	3.2343
	CAS	2.7275
F-111	AIR INTERDICTION	129.3813
A-6	AIR INTERDICTION	38.8144
F-15	AIR INTERDICTION	57.5000
A-7	AIR INTERDICTION	51.7525
F-34	AIR INTERDICTION	48.5180
F-18	AIR INTERDICTION	80.8633
SH-3	ASW(SEA BASED)	6.9457
SH-2	ASW(SEA BASED)	17.3642
SH-60B	ASW(SEA BASED)	27.0109
S-3	ASW(SEA BASED)	34.7284
ATT. SUBS	ASW(SEA BASED)	43.4104
FRIGATES	ASW(SEA BASED)	26.0463
DESTROYERS	ASW(SEA BASED)	15.6273
M-43	ARMY GROUND	42.1854
M-60	ARMY GROUND	67.7980
M-1	ARMY GROUND	75.3311
M-551	ARMY GROUND	0.7513
M-901	ARMY GROUND	47.4586
M-2/M-3	ARMY GROUND	54.2384
M-113	ARMY GROUND	5.2732
MLRS	ARMY GROUND	20.3344
TOWED ART.	ARMY GROUND	36.1589
SELF-PROP.	ARMY GROUND	48.2119
PERSHING	ARMY GROUND	18.0795
GLCMs	ARMY GROUND	22.5993
INFANTRY	ARMY GROUND	37.6655
MORTARS	ARMY GROUND	15.8195
ROLES LNCH	ARMY GROUND	0.2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	6.4216
F-18	6.2500
M-1	5.8224
A-10	5.6216
M-60	5.2402
F-15	4.4444
M-2/M-3	4.1921
A-7	4.0000
F-14	3.7500
CODRA	3.7473
SELF-PROP.	3.7263
M-901	3.6681
ATT. SUBS	3.3552
M-43	3.2603
A-6	3.0000
INFANTRY	2.9112
TOWED ART.	2.7948
S-3	2.6842
SH-60B	2.0877
FRIGATES	2.0131
GLCMs	1.7467
MLRS	1.5721
PERSHING	1.3974
SH-2	1.3421
MORTARS	1.2237
DESTROYERS	1.2079
SH-3	0.9468
RADIO RELAY	0.9608
M-113	0.4074
ART. ACFT	0.1874
M-551	0.0510
ROLES LNCH	0.0151

FLUORSPAR ACID		
A-10	CAS	90.9170
COBRA	CAS	49.4941
F-4	AIR INTERDICTION	129.3813
	CAS	9.0917
F-16	AIR INTERDICTION	89.8481
	CAS	51.5094
ART. ACFT	CAS	3.6367
RADIO RLAY	AIR INTERDICTION	3.2345
	CAS	2.7275
F-111	AIR INTERDICTION	161.7266
A-6	AIR INTERDICTION	48.5180
F-15	AIR INTERDICTION	71.8785
A-7	AIR INTERDICTION	64.6906
F-14	AIR INTERDICTION	53.9087
F-18	AIR INTERDICTION	89.8481
SH-3	ASW(SEA BASED)	6.9427
SH-2	ASW(SEA BASED)	17.3642
SH-60B	ASW(SEA BASED)	33.7617
S-3	ASW(SEA BASED)	43.4104
ATT. SUBS	ASW(SEA BASED)	28.9403
FRIGATES	ASW(SEA BASED)	20.2582
DISTROYERS	ASW(SEA BASED)	12.1547
M-48	ARMY GROUND	12.6556
M-60	ARMY GROUND	20.3244
M-1	ARMY GROUND	22.5993
M-551	ARMY GROUND	0.2260
M-901	ARMY GROUND	54.2384
M-2/M-3	ARMY GROUND	54.2384
M-113	ARMY GROUND	6.0265
MLRS	ARMY GROUND	16.9495
TOWED ART.	ARMY GROUND	22.5993
SELF-PROP.	ARMY GROUND	30.1324
PERSHING	ARMY GROUND	15.8195
GLCMs	ARMY GROUND	26.3659
INFANTRY	ARMY GROUND	60.2649
MORTERS	ARMY GROUND	26.3659
ROLES LNCH	ARMY GROUND	0.2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6216
F-18	5.5576
F-15	4.4444
A-7	4.0000
INFANTRY	3.7263
M-2/M-3	3.3537
M-901	3.3537
F-14	3.3333
A-6	3.0000
COBRA	2.9982
S-3	2.6842
SH-60B	2.0877
SELF-PROP.	1.8632
ATT. SUBS	1.7895
MORTERS	1.6303
GLCMs	1.6303
TOWED ART.	1.3974
M-1	1.3974
M-60	1.2576
FRIGATES	1.2526
SH-2	1.0737
MLRS	1.0480
PERSHING	0.9732
M-48	0.7825
DISTROYERS	0.7516
SH-3	0.4295
M-113	0.3726
RADIO RLAY	0.3636
ART. ACFT	0.2349
ROLES LNCH	0.0140
M-551	0.0140

HYDRETHUM		14 4701
ATT SUBS	ARMYSEA BASED)	29 5298
M-48	ARMY GROUND	47 4586
M-60	ARMY GROUND	5 2732
M-113	ARMY GROUND	31 6380
TOWED ART.	ARMY GROUND	42 1804
SELF-PROP.	ARMY GROUND	75 3311
INFANTRY	ARMY GROUND	88 9122
MORTERS	ARMY GROUND	

NORMALIZED VALUES

INFANTRY	10.0000
M-60	6.3000
SELF-PROP.	5.6000
MORTERS	4.9000
TOWED ART.	4.2000
M-48	3.9200
ATT SUBS	1.9200
M-113	0.7000

ALL COMMODITIES

A-10	CAS	3.0912
COBRA	CAS	2.1011
F-4	AIR INTERDICTION	4.1402
	CAS	0.2909
F-16	AIR INTERDICTION	3.0548
	CAS	1.7173
ART. ACFT	CAS	0.1333
RADIO RLY	AIR INTERDICTION	0.1294
	CAS	0.1081
F-111	AIR INTERDICTION	5.4937
A-6	AIR INTERDICTION	1.6981
F-15	AIR INTERDICTION	2.4439
A-7	AIR INTERDICTION	2.1995
F-14	AIR INTERDICTION	1.9407
F-18	AIR INTERDICTION	3.2345
SH-3	ASW(SEA BASED)	0.2518
SH-2	ASW(SEA BASED)	0.6295
SH-60B	ASW(SEA BASED)	1.0417
S-3	ASW(SEA BASED)	1.4760
ATT. SUBS	ASW(SEA BASED)	1.2541
FRIGATES	ASW(SEA BASED)	0.7524
DESTROYERS	ASW(SEA BASED)	0.4515
M-48	ARMY GROUND	1.2656
M-60	ARMY GROUND	2.0339
M-1	ARMY GROUND	2.0339
M-551	ARMY GROUND	0.9123
M-901	ARMY GROUND	1.6272
M-2/M-3	ARMY GROUND	1.6272
M-113	ARMY GROUND	0.2260
MLRS	ARMY GROUND	0.6780
TOWED ART.	ARMY GROUND	1.2204
SELF-PROP.	ARMY GROUND	1.6172
PERSHING	ARMY GROUND	0.6780
GLCMs	ARMY GROUND	1.0546
INFANTRY	ARMY GROUND	2.4106
MORTARS	ARMY GROUND	1.2123
ROLES LNCH	ARMY GROUND	0.0226

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.0585
F-18	5.8824
A-10	5.6216
F-15	4.4444
INFANTRY	4.3839
A-7	4.0000
COBRA	3.8213
M-1	3.6989
M-60	3.6989
F-14	3.5294
A-6	3.0882
SELF-PROP.	2.9592
M-2/M-3	2.9592
M-901	2.9592
S-3	2.6842
M-48	2.3016
ATT. SUBS	2.2807
TOWED ART.	2.2194
MORTARS	2.2057
GLCMs	1.9190
SH-60B	1.9035
FRIGATES	1.8694
PERSHING	1.2330
MLRS	1.2330
SH-2	1.1417
DESTROYERS	0.9210
SH-3	0.4519
RADIO RLY	0.4337
M-113	0.4110
ART. ACFT	0.2426
ROLES LNCH	0.0411
M-101	0.0226

CRITICALITY OF SHORTFALL
ALL FEED
(LOC 3)

COMMODITY	GOAL (UNITS)	STOCK PILE (UNITS)	SHORT FALL (UNITS)	TRANS- LATED	FEED COMMODITY IMPORT	CRITICALITY	NEW 1700 FEED CRITICALITY
COBALT	81.4	43.9	-41.7	402.5	9.5	3418.1	7.5
IN	42.0	190.6	358.8	0.0	10.0	0.0	0.0
NICKEL	200.0	32.2	-88.9	437.7	10.0	4377.1	10.0
FLUORSPAR ACID	1400.0	880.0	-520.0	308.9	9.6	3744.3	9.6
MYRETHRUM	500.0	0.0	-500.0	453.9	4.1	1850.7	4.1

COMPOSITE IMPORTANCE
(LOC 3)

COBALT

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1350	6.43	1.92	0.520	3.343
MOROCCO	450	2.14	1.50	0.667	1.429
BOTSWANA	250	1.19	0.71	1.404	1.571
SOUTH AFRICA	150	0.71	1.17	0.841	0.601
HAIRE	9000	42.86	0.31	1.404	0.171
INDONESIA	3500	17.67	0.71	1.404	1.171
PHILIPPINES	50	0.24	0.92	1.087	0.21
AUSTRALIA	400	1.90	0.92	1.087	0.21
NEW CALEDONIA	250	1.19	0.92	1.087	1.171
PANAMA	1100	5.24	2.61	0.384	1.171
U.S.	4500	21.43	2.56	0.384	8.333
TOTAL	21000	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
AUSTRALIA	100	0.15	0.92	1.087	0.161
U.S.	16100	23.82	2.56	0.391	9.319
THAILAND	5900	8.73	0.92	1.087	9.483
INDONESIA	5800	8.58	0.92	1.087	9.332
PERU	100	0.15	1.96	0.510	0.075
BOLIVIA	10300	15.24	0.98	1.020	15.543
BRAZIL	2400	3.55	0.86	1.162	4.129
PERU	3000	4.44	2.47	0.405	1.796
MALAYSIA	23900	35.36	0.92	1.087	38.414
TOTAL	67600	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

NICKEL

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1000	0.35	1.92	0.520	0.171
SOUTH AFRICA	3000	1.64	1.19	0.841	1.511
PHILIPPINES	5000	1.64	0.92	1.087	1.740
AUSTRALIA	25000	8.21	0.92	1.087	1.800
CANADA	150000	48.23	2.89	0.343	17.644
USSR	80000	28.91	2.56	0.391	11.311
GREECE	600	0.20	1.96	0.510	0.100
NETHERLANDS	200	0.07	1.96	0.510	0.064
FRG	100	0.03	1.96	0.510	0.032
ROMANIA	500	0.13	1.96	0.510	0.064
USSR	5000	1.64	0.94	1.081	1.740
DEM. REP. PUB.	15000	4.93	1.93	0.406	0.211
GUATEMALA	4000	1.31	1.53	0.656	0.801
INDONESIA	5000	1.64	0.92	1.087	1.740

TOTAL: 304400 100.00

COMPOSITE IMPORTANCE
(LOC 3)

FLUOROSULFONIC ACID

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	190	22.36	1.19	0.841	18.711
USSR	70	8.70	2.56	0.391	3.402
ITALY	65	8.07	1.96	0.510	4.110
FRANCE	100	12.42	1.96	0.510	4.331
EAST AFRICA	25	3.11	0.71	1.404	4.310
THAILAND	15	1.86	0.92	1.087	2.025
MEXICO	350	43.48	2.56	0.391	17.011

TOTAL: 805 100.00

COMPOSITE IMPORTANCE
(LOC 3)

PYRETHRUM

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	2000	1.01	1.19	0.841	0.802
AUSTRALIA	1500	0.76	0.92	1.087	0.820
UK	11000	5.57	1.96	0.510	2.842
KENYA	80000	40.51	0.71	1.404	56.855
RWANDA	25000	12.66	0.71	1.404	17.767
TANZANIA	78000	39.49	0.71	1.404	50.423

TOTAL: 197500 100.00

SOURCE IMPORTANCE
(LOC 3)

SOURCE	% (1/01) CUM. IMP.	FE/SHORTFALL CRITICALITY	TOTAL	NORMALIZED TOTAL
COBALT				
FINLAND	3.243	7.81	26.11	-5.51
MOROCCO	1.421	7.81	11.16	2.11
BOTSWANNA	1.671	7.81	13.05	2.78
SOUTH AFRICA	0.601	7.81	4.69	1.00
ZAIRE	60.154	7.81	469.75	100.00
ZAMBIA	23.393	7.81	182.68	38.71
PHILIPPINES	0.209	7.81	2.01	0.43
AUSTRALIA	2.070	7.81	16.16	3.44
NEW CALEDONIA	1.293	7.81	10.10	2.15
CANADA	1.813	7.81	14.16	3.01
U.S.	8.384	7.81	65.41	13.72
IN				
AUSTRALIA	0.161	0.00	0.00	0.00
U.S.	9.319	0.00	0.00	0.00
THAILAND	9.483	0.00	0.00	0.00
INDONESIA	9.322	0.00	0.00	0.00
UK	0.075	0.00	0.00	0.00
BOLIVIA	15.543	0.00	0.00	0.00
BRAZIL	4.125	0.00	0.00	0.00
FRG	1.796	0.00	0.00	0.00
MALAYSIA	36.414	0.00	0.00	0.00
NICKEL				
FINLAND	0.171	10.00	1.71	0.31
SOUTH AFRICA	1.381	10.00	13.81	2.94
PHILIPPINES	1.785	10.00	17.85	3.80
AUSTRALIA	8.924	10.00	89.24	19.61
CANADA	17.054	10.00	170.54	34.30
U.S.	11.311	10.00	113.11	24.07
GREECE	0.101	10.00	1.01	0.21
NETHERLANDS	0.034	10.00	0.34	0.07
FRG	0.017	10.00	0.17	0.04
YUGOSLAVIA	0.034	10.00	0.34	0.17
USSR	1.742	10.00	17.42	3.71
DOM. REPUB.	3.230	10.00	32.30	6.83
GUATAMALA	0.861	10.00	8.61	1.83
INDONESIA	1.785	10.00	17.85	3.80
FLUORSPAR ACID				
SOUTH AFRICA	18.803	8.55	160.85	34.24
U.S.	3.402	8.55	29.10	6.20
ITALY	4.120	8.55	35.24	7.50
SPAIN	6.338	8.55	54.22	11.54
EAST AFRICA	4.359	8.55	37.29	7.94
THAILAND	2.025	8.55	17.32	3.69
MEXICO	17.011	8.55	145.52	30.98
PYRETHRUM				
SOUTH AFRICA	0.852	4.30	3.66	0.78
AUSTRALIA	0.820	4.30	3.59	0.77
UK	2.842	4.30	12.21	2.60
KENYA	56.855	4.30	244.29	52.00
RWANDA	17.767	4.30	76.34	16.25
TANZANIA	55.433	4.30	238.18	50.70

SOURCE IMPORTANCE
RANKED BY SOURCE
(LOT 3)

#	SOURCE	COMMODITY	VALUE
1	ZAMBIA	COBALT	100.00
2	KENYA	PYRETHRUM	52.00
3	TANZANIA	PYRETHRUM	50.70
4	ZAMBIA	COBALT	38.89
5	CANADA	NICKEL	34.30
6	SOUTH AFRICA	FLUORSPAR ACID	34.24
7	MEXICO	FLUORSPAR ACID	30.88
8	U.S.	NICKEL	24.08
9	AUSTRALIA	NICKEL	19.00
10	RWANDA	PYRETHRUM	16.25
11	U.S.	COBALT	13.92
12	SPAIN	FLUORSPAR ACID	11.56
13	EAST AFRICA	FLUORSPAR ACID	7.94
14	ITALY	FLUORSPAR ACID	7.50
15	DOM. REPUB.	NICKEL	6.88
16	U.S.	FLUORSPAR ACID	6.20
17	FINLAND	COBALT	5.56
18	INDONESIA	NICKEL	3.87
19	PHILIPPINES	NICKEL	3.80
20	USSR	NICKEL	3.71
21	THAILAND	FLUORSPAR ACID	3.19
22	AUSTRALIA	COBALT	3.07
23	CANADA	COBALT	3.01
24	SOUTH AFRICA	NICKEL	2.97
25	BOTSWANA	COBALT	2.78
26	U.S.	PYRETHRUM	2.60
27	MOROCCO	COBALT	2.38
28	NEW CALEDONIA	COBALT	2.10
29	GUATEMALA	NICKEL	1.83
30	SOUTH AFRICA	COBALT	1.00
31	SOUTH AFRICA	PYRETHRUM	0.78
32	AUSTRALIA	PYRETHRUM	0.73
33	PHILIPPINES	COBALT	0.43
34	FINLAND	NICKEL	0.34
35	GREECE	NICKEL	0.21
36	YUGOSLAVIA	NICKEL	0.18
37	NETHERLANDS	NICKEL	0.07
38	FRG	NICKEL	0.04
39	MALAYSIA	TIN	0.00
40	PRC	TIN	0.00
41	BRAZIL	TIN	0.00
42	BOLIVIA	TIN	0.00
43	UK	TIN	0.00
44	INDONESIA	TIN	0.00
45	THAILAND	TIN	0.00
46	U.S.	TIN	0.00
47	AUSTRALIA	TIN	0.00

SCENARIO 14

WEIGHTS on REGION by LEVEL of CONFLICT and MEDIA

Level of Conflict 3 Media 1

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	7.0	5.0	7.0	2.0	2.0	3.0	2.0	6.0
I/Coeff	0.1786	0.1786	0.1250	0.0833	0.1250	0.0357	0.0357	0.0833	0.0357	0.1071

Level of Conflict 3 Media 2

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	9.0	4.0	7.0	5.0	1.0	8.0	7.0	5.0
Weight	9.0									
I/Coeff	0.1333	0.1333	0.1200	0.0510	0.0714	0.0657	0.0133	0.1047	0.0935	0.0617
I/Coeff	0.1200									

Level of Conflict 3 Media 3

Region	1	2	3	4	5	6	7
Weight	10.0	10.0	10.0	8.0	6.0	4.0	3.0
I/Coeff	0.1786	0.1786	0.1786	0.1429	0.1071	0.0714	0.1429

Level of Conflict 3 Media 4

Region	1	2	3	4
Weight	10.0	4.0	2.0	1.0
I/Coeff	0.5882	0.2000	0.1176	0.0588

INFLUENCE COEFFICIENTS OVER ALL LEVEL OF CONFLICTS

on the Importance of Controlling EACH region within its own Media

Media 1	Region	1	2	3	4	5	6	7	8	9	10
I/Coeff		0.0228	0.0228	0.0160	0.0114	0.0130	0.0044	0.0044	0.0114	0.0044	0.0117

Media 2	Region	1	2	3	4	5	6	7	8	9	10
I/Coeff		0.0171	0.0171	0.0154	0.0068	0.0119	0.0085	0.0017	0.0136	0.0119	0.0080

Media 3	Region	1	2	3	4	5	6	7
I/Coeff		0.0228	0.0228	0.0228	0.0133	0.0137	0.0091	0.0133

Media 4	Region	1	2	3	4
I/Coeff		0.0752	0.0301	0.0150	0.0075

Importance of controlling ANY Region within its Media as compared to the Importance of controlling ANY Region of any other Media

Media 1	Region	1	2	3	4	5	6	7	8	9	10
I/Coeff		0.0099	0.0099	0.0070	0.0050	0.0070	0.0020	0.0020	0.0050	0.0020	0.0046

Media 2	Region	1	2	3	4	5	6	7	8	9	10
I/Coeff		0.0037	0.0037	0.0033	0.0015	0.0026	0.0019	0.0004	0.0030	0.0026	0.0019

Media 3	Region	1	2	3	4	5	6	7
I/Coeff		0.0060	0.0060	0.0060	0.0048	0.0036	0.0024	0.0048

Media 4	Region	1	2	3	4
I/Coeff		0.0065	0.0026	0.0013	0.0007

FORCE ELEMENT IMPORTANCE
(LOC 3)

RANK	ELEMENT NUMBER	FORCE ELEMENT NAME	CALCULATED VALUE	NORMALIZED VALUE
1	17	CARRIER BATTLE GROUP	0.141	10.000
2	1	AIR INTERDICTION	0.117	8.211
3	3	ARMY GROUND	0.104	7.382
4	16	AIRTAIR FUEL	0.072	5.135
5	19	SURFACE COMBATANTS	0.060	4.247
6	11	THEATER NUCLEAR WEAPON	0.054	3.812
7	8	RAPID DEPLOY	0.052	3.706
8	4	CAS	0.044	3.112
9	14	ASW(LAND BASED)	0.043	3.087
10	20	AIR SUPERIORITY(LAND BASED)	0.041	2.910
11	15	ASW(SEA BASED)	0.038	2.815
12	23	AIR SUPERIORITY(SHIP BASED)	0.030	2.210
13	21	AIR DEFENSE(SHIP BASED)	0.029	2.065
14	10	STRATEGIC BOMBER	0.025	1.744
15	25	SPACE BASED WEAPON(AIR CNTRL)	0.020	1.416
16	29	ASAT(SPACE BASED)	0.013	0.924
17	18	MINE WARFARE	0.013	0.891
18	1	AMPHIBIOUS ASSAULT	0.011	0.797
19	13	SEA LAL OPERATIONS	0.010	0.711
20	28	ASW(LAND BASED)	0.007	0.510
21	26	AIR DEFENSE(LAND BASED)	0.004	0.278
22	9	SPACE BASED WEAPON(AIR CNTRL)	0.003	0.212
23	30	SPACE BASED WEAPON(SEA CNTRL)	0.002	0.111
24	27	ASW(SPACE BASED)	0.000	0.000
25	24	ASW(LAND BASED)	0.000	0.000
26	24	INTERCEPTOR AIRCRAFT	0.000	0.000
27	11	SLBM	0.000	0.000
28	7	ICBM	0.000	0.000
29	5	CIVIL DEFENSE	0.000	0.000
30	4	CBS	0.000	0.000

COMBINATION IMPORTANCE
(LOC 3)

COBALT

AIR INTERDICTION	5.71
ARMY GROUND	4.52
CAS	1.73
ICBM	0.00
STRATEGIC BOMBER	1.79
SLBM	0.00
ASW(SEA BASED)	1.27
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ASAT(LAND BASED)	0.51

34.99

TIN

AIR INTERDICTION	5.40
ARMY GROUND	1.92
CAS	1.91
STRATEGIC BOMBER	1.77
ASW(LAND BASED)	3.05
ASW(SEA BASED)	1.11
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
41.19	

NICKEL

AIR INTERDICTION	5.60
ARMY GROUND	4.92
CAS	1.72
STRATEGIC BOMBER	1.79
ASW(SEA BASED)	1.71
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.85
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
41.21	

PYRETHRUM

ARMY GROUND	3.77
CIVIL DEFENSE	0.00
ASW(SEA BASED)	0.14
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
17.60	

COMMODITY NORMALIZED IMPORTANCE

FLUORSPAR ACID	NICKEL	TIN	FLUORSPAR ACID	COBALT	PYRETHRUM
AIR INTERDICTION	7.13	0.76	9.60	8.49	4.14
AMPHIBIOUS ASSAULT	0.76	3.65	9.60	8.49	4.14
ARMY GROUND	3.65	2.05	9.60	8.49	4.14
CAS	2.05	0.00	9.60	8.49	4.14
ICBM	0.00	1.79	9.60	8.49	4.14
STRATEGIC BOMBER	1.79	0.00	9.60	8.49	4.14
SLBM	0.00	3.08	9.60	8.49	4.14
ASW(LAND BASED)	3.08	1.63	9.60	8.49	4.14
ASW(SEA BASED)	1.63	10.00	9.60	8.49	4.14
CARRIER BATTLE GROUP	10.00	4.25	9.60	8.49	4.14
SURFACE COMBATANTS	4.25	2.91	9.60	8.49	4.14
AIR SUPERIORITY(LAND BASED)	2.91	2.28	9.60	8.49	4.14
AIR SUPERIORITY(SHIP BASED)	2.28	0.00	9.60	8.49	4.14
INTERCEPTOR AIRCRAFT	0.00	0.00	9.60	8.49	4.14
ABM(LAND BASED)	0.00				
39.57					

CATAL		
A-10	CAS	71 7586
COBRA	CAS	48 4841
F-4	AIR INTERDICTION	103 5050
	CAS	7 2714
F-16	AIR INTERDICTION	71 8785
	CAS	40 4075
ART. ACFT	CAS	3 6367
RADIO RLY	AIR INTERDICTION	3 2345
	CAS	2 7275
F-111	AIR INTERDICTION	129 3813
A-6	AIR INTERDICTION	38 8144
F-15	AIR INTERDICTION	57 5028
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	43 1271
F-18	AIR INTERDICTION	71 8785
SH-3	ASW(SEA BASED)	6 0775
SH-2	ASW(SEA BASED)	15 1937
SH-60F	ASW(SEA BASED)	23 6341
S-3	ASW(SEA BASED)	34 7284
ATT. SUBS	ASW(SEA BASED)	24 1169
FRIGATES	ASW(SEA BASED)	14 4701
DESTROYERS	ASW(SEA BASED)	8 6821
M-48	ARMY GROUND	37 9443
M-60	ARMY GROUND	61 0137
M-1	ARMY GROUND	67 7980
M-551	ARMY GROUND	0 2120
M-901	ARMY GROUND	54 2384
M-270-3	ARMY GROUND	47 4506
M-113	ARMY GROUND	5 2732
MLRS	ARMY GROUND	20 3391
TOWED ART.	ARMY GROUND	27 1192
SELF-PROP.	ARMY GROUND	36 1589
PERCHING	ARMY GROUND	18 0795
GLCMS	ARMY GROUND	30 1324
INFANTRY	ARMY GROUND	7 5331
MORTERS	ARMY GROUND	36 9122
COLES LNCH	ARMY GROUND	1 5820

NORMALIZED VALUES	
F-111	10 0000
F-16	8 6787
F-4	8 5622
A-10	5 6216
F-18	5 5556
M-1	5 2402
M-60	4 7162
F-15	4 4444
M-201	4 1921
A-7	4 0000
COBRA	3 7478
M-2/M-3	3 6681
F-14	3 3333
A-6	3 0000
M-48	2 9845
MORTERS	2 8500
SELF-PROP.	2 7948
S-3	2 6842
GLCMS	2 3290
TOWED ART.	2 0971
ATT. SUBS	1 8640
SH-60B	1 8277
MLRS	1 5721
PERCHING	1 3974
SH-2	1 1743
FRIGATES	1 1186
DESTROYERS	0 6710
INFANTRY	0 5877
SH-3	0 4697
RADIO RLY	0 4603
M-113	0 4076
ART. ACFT	0 2811
COLES LNCH	0 1773
BLIND	0 0171

TIN		
A-10	CAS	71 2431
COBRA	CAS	64 6511
F-4	AIR INTERDICTION	109 5050
	CAS	7 2214
F-16	AIR INTERDICTION	71 8185
	CAS	40 4075
ART. ACFT	CAS	8 6347
RADIO RELAY	AIR INTERDICTION	3 1345
	CAS	2 7275
F-111	AIR INTERDICTION	125 3910
A-6	AIR INTERDICTION	43 6662
F-15	AIR INTERDICTION	57 5075
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	48 310
F-18	AIR INTERDICTION	80 8435
SH-3	ASW(SEA BASED)	5 2093
SH-2	ASW(SEA BASED)	13 0231
SH-60F	ASW(SEA BASED)	20 2582
S-3	ASW(SEA BASED)	34 7284
ATT. SUBS	ASW(SEA BASED)	14 4701
FRIGATES	ASW(SEA BASED)	14 4701
DESTROYERS	ASW(SEA BASED)	8 6821
M-48	ARMY GROUND	4 2185
M-60	ARMY GROUND	6 7752
M-1	ARMY GROUND	37 6457
M-551	ARMY GROUND	0 0753
M-901	ARMY GROUND	6 7799
M-2/M-3	ARMY GROUND	6 7799
M-113	ARMY GROUND	0 7533
MLRS	ARMY GROUND	10 1697
TOWED ART	ARMY GROUND	4 5199
SELF-PROP.	ARMY GROUND	6 0265
PERSHING	ARMY GROUND	15 8195
GLOMS	ARMY GROUND	26 3659
INFANTRY	ARMY GROUND	60 2649
MORTERS	ARMY GROUND	5 2732
ROLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10 0000
F-16	8 6787
F-4	8 5622
F-15	6 2500
A-10	5 6216
COBRA	4 9970
INFANTRY	4 6579
F-18	4 4444
A-7	4 0000
F-14	3 7500
C-6	3 3750
M-1	2 9112
SH-3	2 6842
GLOMS	2 0373
SH-60F	1 5458
PERSHING	1 2227
FRIGATES	1 1184
ATT. SUBS	1 1184
SH-2	1 0066
MLRS	0 7870
DESTROYERS	0 6710
M-2/M-3	0 5240
M-901	0 5240
M-60	0 5240
SELF-PROP.	0 4658
RADIO RELAY	0 4603
MORTERS	0 4076
SH-6	0 4076
TOWED ART	0 3403
M-551	0 3261
ART. ACFT	0 2911
M-113	0 0932
ROLES LNCH	0 0170
	0 0000

NICKEL		
A-10	CAS	72 7386
C-130A	CAS	43 4111
F-4	AIR INTERDICTION	77 6288
	CAS	5 4530
F-16	AIR INTERDICTION	71 5785
	CAS	43 4075
ART. ACFT	CAS	2 4745
RADIO RLY	AIR INTERDICTION	3 2345
	CAS	2 7275
F-111	AIR INTERDICTION	129 3819
A-6	AIR INTERDICTION	99 8144
F-15	AIR INTERDICTION	57 5028
A-7	AIR INTERDICTION	51 7515
F-14	AIR INTERDICTION	48 5180
F-19	AIR INTERDICTION	80 8455
SH-3	ASW(SEA BASED)	6 8457
SH-2	ASW(SEA BASED)	17 3642
SH-60B	ASW(SEA BASED)	27 0104
S-3	ASW(SEA BASED)	34 7294
ATT. SUBS	ASW(SEA BASED)	43 4104
FRIGATES	ASW(SEA BASED)	26 0463
DESTROYERS	ASW(SEA BASED)	15 6278
M-48	ARMY GROUND	42 1854
M-60	ARMY GROUND	67 7980
M-1	ARMY GROUND	75 3311
M-551	ARMY GROUND	0 7538
M-901	ARMY GROUND	47 4586
M-2/M-3	ARMY GROUND	54 2304
M-113	ARMY GROUND	5 2732
MLRE	ARMY GROUND	20 3894
TOWED ART.	ARMY GROUND	36 1589
SELF-PROP.	ARMY GROUND	43 2114
PERSHING	ARMY GROUND	18 0795
GLCMS	ARMY GROUND	22 5993
INFANTRY	ARMY GROUND	37 6655
MORTARS	ARMY GROUND	15 8195
ROLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	6.4216
F-18	6.2500
M-1	5.8224
A-10	5.6216
M-60	5.2402
F-15	4.4444
M-2/M-3	4.1921
A-7	4.0000
F-14	3.7500
COTRA	3.7478
SELF-PROP.	3.7243
M-901	3.6651
ATT. SUBS	3.3552
M-48	3.2605
A-6	3.0000
INFANTRY	2.9112
TOWED ART.	2.7948
S-3	2.6862
SH-60B	2.0877
FRIGATES	2.0181
GLCMS	1.7447
MRS	1.5711
PERSHING	1.3974
SH-2	1.3471
MORTARS	1.2227
DESTROYERS	1.2077
SH-3	0.5363
RADIO RLY	0.4603
M-113	0.4076
ART. ACFT	0.1024
M-551	0.0032
ROLES LNCH	0.0125

FLUORSPAR ACID		
A-10	CAS	90 9170
COBRA	CAS	43 89 1
F-4	AIR INTERDICTION	129 3813
	CAS	9 0917
F-16	AIR INTERDICTION	33 8131
	CAS	31 5034
ART. ALRFT	CAS	3 6367
RADIO RLAY	AIR INTERDICTION	3 2345
	CAS	2 7275
F-111	AIR INTERDICTION	161 7266
A-6	AIR INTERDICTION	45 5130
F-15	AIR INTERDICTION	71 8733
A-7	AIR INTERDICTION	64 6906
F-14	AIR INTERDICTION	53 9039
F-18	AIR INTERDICTION	89 8431
SH-3	ASW (SEA BASED)	6 9437
SH-2	ASW (SEA BASED)	17 3642
SH-60B	ASW (SEA BASED)	33 7637
S-3	ASW (SEA BASED)	43 4104
ATT. SUBS	ASW (SEA BASED)	28 9403
FRIGATES	ASW (SEA BASED)	20 2582
DSTROYERS	ASW (SEA BASED)	12 1549
M-48	ARMY GROUND	17 6553
M-60	ARMY GROUND	20 3933
M-1	ARMY GROUND	22 5993
M-551	ARMY GROUND	0 2730
M-901	ARMY GROUND	54 2364
M-24M-3	ARMY GROUND	54 2364
M-113	ARMY GROUND	6 6245
MLRS	ARMY GROUND	16 9435
TOWED ART.	ARMY GROUND	22 5993
SELF-PROP.	ARMY GROUND	30 1324
PERSHING	ARMY GROUND	15 8195
GLOMS	ARMY GROUND	26 3639
INFANTRY	ARMY GROUND	60 2649
MORTERS	ARMY GROUND	26 3639
ROLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10 0000
F-16	3 6787
F-4	3 5622
A-10	5 6216
F-18	5 5556
F-15	4 4444
A-7	4 0000
INFANTRY	3 7263
M-24M-3	3 3537
M-901	3 3537
F-14	3 3333
A-6	3 0000
COBRA	2 9982
S-3	2 6832
SH-60B	2 0877
SELF-PROP.	1 8632
ATT. SUBS	1 7895
MORTERS	1 6303
GLOMS	1 6303
TOWED ART.	1 3974
M-1	1 3974
M-60	1 2576
FRIGATES	1 2526
SH-2	1 0737
MLRS	1 0480
PERSHING	0 9732
M-48	0 7835
DSTROYERS	0 7516
SH-3	0 4205
M-113	0 3734
RADIO RLAY	0 3636
ART. ALRFT	0 3233
ROLES LNCH	0 0140
F-111	0 0170

PYRETHRUM		
ATT. SUBS	ASW (SEA BASED)	14.4701
M-49	ARMY GROUND	14.0000
M-60	ARMY GROUND	47.4000
M-113	ARMY GROUND	5.2782
TOWED ART	ARMY GROUND	31.6000
SELF-PROP	ARMY GROUND	42.1000
INFANTRY	ARMY GROUND	75.3311
MORTERS	ARMY GROUND	36.9122

NORMALIZED VALUES

INFANTRY	10.0000
M-60	6.3000
SELF-PROP.	5.6000
MORTERS	4.9000
TOWED ART	4.2000
M-49	3.9200
ATT. SUBS	1.9200
M-113	0.7000

ALL COMMODITIES

A-10	CAS	3 0000
COBRA	CAS	2 1010
F-4	AIR INTERDICTION	4 1402
	CAS	0 2909
F-16	AIR INTERDICTION	0 0548
	CAS	1 7173
ART. ACFT	CAS	0 1233
RADIO RLY	AIR INTERDICTION	0 1294
	CAS	0 1091
F-111	AIR INTERDICTION	5 4907
A-6	AIR INTERDICTION	1 6981
F-15	AIR INTERDICTION	2 4479
A-7	AIR INTERDICTION	1 1995
F-14	AIR INTERDICTION	1 9407
F-18	AIR INTERDICTION	3 0345
SH-3	ASW(SEA BASED)	0 2510
SH-2	ASW(SEA BASED)	0 6295
SH-60B	ASW(SEA BASED)	1 0417
S-3	ASW(SEA BASED)	1 4760
ATT. SUBS	ASW(SEA BASED)	1 2541
FRIGATES	ASW(SEA BASED)	0 7524
DESTROYERS	ASW(SEA BASED)	0 4515
M-48	ARMY GROUND	1 2656
M-60	ARMY GROUND	2 0339
M-1	ARMY GROUND	2 0339
M-551	ARMY GROUND	0 0108
M-901	ARMY GROUND	1 6272
M-2/M-3	ARMY GROUND	1 6272
M-113	ARMY GROUND	0 0260
MLRS	ARMY GROUND	0 6780
TOWED ART.	ARMY GROUND	1 2204
SELF-PROP.	ARMY GROUND	1 6272
PERSHING	ARMY GROUND	0 6780
GLCMs	ARMY GROUND	1 0546
INFANTRY	ARMY GROUND	2 4106
MORTERS	ARMY GROUND	1 2128
ROLES LNCH	ARMY GROUND	0 0226

NORMALIZED VALUES	
10.0000	
8.6787	F-111
8.0585	F-16
5.8824	F-4
5.6216	F-18
4.4444	A-10
4.3839	F-15
4.0000	INFANTRY
3.8213	A-7
3.6989	COBRA
3.6294	M-1
3.0882	M-60
2.9592	F-14
2.9592	A-6
2.9592	SELF-PROP.
2.6842	M-2/M-3
2.6016	M-901
2.2807	S-3
2.2194	M-48
2.2057	ATT. SUBS
1.9180	TOWED ART.
1.9035	MORTERS
1.8684	GLCMs
1.2330	SH-60B
1.2330	FRIGATES
1.1447	PERSHING
0.8210	MLRS
0.4579	SH-2
0.4317	DESTROYERS
0.4110	SH-3
0.2475	RADIO RLY
0.0411	M-113
0.0226	ART. ACFT
	ROLES LNCH
	M-551

CRITICALITY OF SHORTFALL
A L F E F
(LOC 3)

COMMODITY	GRN (UNITS)	STOCK PILE (UNITS)	SHORT FALL (%)	TRANS- LATED	FEZ IMPORT.	CRITICALITY	CRITICALITY
COBALT	80.4	48.8	-40.7	400.5	8.5	3418.1	7.8
TIN	40.0	190.6	233.8	0.0	10.0	0.0	0.0
NICKEL	200.0	32.2	-44.9	400.7	10.0	4377.1	10.0
FLUORESPAR ACID	1400.0	895.0	-36.1	300.0	9.6	3742.3	9.6
PYRETHRUM	100.0	0.0	-100.0	400.8	4.1	1600.7	4.1

COMPOSITE IMPORTANCE
(LOC 3)

COBALT

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	1/CI
ZAIRE	12500.	71.43	0.71	1.404	100.250
ZAMBIA	2900	16.57	0.71	1.404	10.000
CANADA	1100	6.29	2.89	0.348	2.175
U.S.	1000	5.71	2.56	0.391	1.000
TOTAL	17500	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

TIN

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	1/CI
AUSTRALIA	100.	0.15	0.92	1.087	0.161
U.S.	16100.	23.82	2.56	0.391	9.319
THAILAND	5900	8.73	0.92	1.087	9.490
INDONESIA	5800	8.58	0.92	1.087	9.320
UK	100.	0.15	1.96	0.510	0.075
BOLIVIA	10300.	15.24	0.98	1.020	15.540
BRAZIL	2400.	3.55	0.86	1.162	4.175
PRC	3000	4.44	2.47	0.405	1.776
MALAYSIA	23900.	35.36	0.92	1.087	38.414
TOTAL:	67600.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

NICKEL

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1000.	0.23	1.92	0.520	0.171
SOUTH AFRICA	5000.	1.64	1.19	0.841	1.313
PHILIPPINES	5000.	1.64	0.92	1.087	1.707
AUSTRALIA	25000.	8.21	0.92	1.087	8.707
CANADA	150000.	49.29	2.89	0.343	17.017
U.S.	88000.	28.91	2.56	0.391	11.311
GREECE	600.	0.20	1.96	0.510	0.101
NETHERLANDS	200.	0.07	1.96	0.510	0.004
FRG	100.	0.03	1.96	0.510	0.017
YUGOSLAVIA	500.	0.16	1.96	0.510	0.004
USSR	5000.	1.64	0.94	1.061	1.743
DOM. REPUB	15000.	4.93	1.73	0.656	4.107
GUATEMALA	4000.	1.31	1.53	0.656	0.861
INDONESIA	5000.	1.64	0.92	1.087	1.713
TOTAL:	304400.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

FLUOROSULFONIC ACID

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	180.	22.36	1.19	0.841	18.301
U.S.	70.	8.70	2.56	0.391	3.481
ITALY	65.	8.07	1.96	0.510	4.120
SPAIN	100.	12.42	1.96	0.510	6.303
EAST AFRICA	25.	3.11	0.71	1.404	4.303
THAILAND	15.	1.86	0.92	1.087	2.025
MEXICO	350.	43.48	2.56	0.391	17.011
TOTAL:	805.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

PYRETHRUM

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	2000.	1.01	1.19	0.841	0.852
AUSTRALIA	1500.	0.76	0.92	1.087	0.825
UK	11000.	5.57	1.96	0.510	2.842
KENYA	80000.	40.51	0.71	1.404	56.855
RWANDA	25000.	12.66	0.71	1.404	17.767
TANZANIA	78000.	39.49	0.71	1.404	53.433
TOTAL:	197500.	100.00			

SOURCE IMPORTANCE
(LUG 82)

SOURCE	% (1/01) CONCENTR	FE/SHORTFALL CRITICALITY	TOTAL	NORMALIZED TO 100
COBALT				
ZAIRE	100.257	7.81	782.91	100.00
ZAMBIA	23.214	7.81	181.64	23.19
CANADA	2.175	7.81	16.99	2.17
U S	2.234	7.81	17.44	2.21
TIN				
AUSTRALIA	0.161	0.00	0.00	0.00
U S	0.214	0.00	0.00	0.00
THAILAND	9.483	0.00	0.00	0.00
INDONESIA	9.322	0.00	0.00	0.00
UK	0.075	0.00	0.00	0.00
BOLIVIA	15.543	0.00	0.00	0.00
BRAZIL	4.125	0.00	0.00	0.00
PRC	1.793	0.00	0.00	0.00
MALAYSIA	33.414	0.00	0.00	0.00
NICKEL				
FINLAND	0.171	10.00	1.71	0.22
SOUTH AFRICA	1.381	10.00	13.81	1.74
PHILIPPINES	1.785	10.00	17.85	2.28
AUSTRALIA	8.923	10.00	89.24	11.40
CANADA	17.034	10.00	170.50	21.79
U S	11.311	10.00	113.11	14.40
GREECE	0.101	10.00	1.01	0.13
NETHERLANDS	0.034	10.00	0.34	0.04
FRG	0.017	10.00	0.17	0.02
YUGOSLAVIA	0.034	10.00	0.34	0.11
USSR	1.742	10.00	17.42	2.23
DOM. REPUB.	3.230	10.00	32.30	4.13
GUATAMALA	0.861	10.00	8.61	1.10
INDONESIA	1.730	10.00	17.30	2.20
FLUORSPAR ACID				
SOUTH AFRICA	18.803	8.55	160.85	20.54
U S	3.402	8.55	29.10	3.72
ITALY	4.120	8.55	35.24	4.50
SPAIN	6.338	8.55	54.22	6.91
EAST AFRICA	4.359	8.55	37.29	4.76
THAILAND	2.020	8.55	17.32	2.21
MEXICO	17.011	8.55	145.52	18.59
PYRETHRUM				
SOUTH AFRICA	0.852	4.30	3.66	0.47
AUSTRALIA	0.825	4.30	3.55	0.45
UK	2.842	4.30	12.21	1.56
KENYA	56.850	4.30	244.29	31.20
RWANDA	17.767	4.30	76.34	9.75
TANZANIA	55.433	4.30	238.18	30.42

SOURCE IMPORTANCE
RANKED BY SOURCE
1980-87

#	SOURCE	COUNTRY	VALUE
1	ZAIPE	COPPER	100.00
2	KENYA	PYRETHRUM	31.20
3	TANZANIA	PYRETHRUM	30.42
4	ZAMBIA	COPPER	23.20
5	CANADA	NICKEL	21.78
6	SOUTH AFRICA	FLUOROPAR ACID	20.54
7	MEXICO	FLUOROPAR ACID	18.59
8	U.S.	NICKEL	14.45
9	AUSTRALIA	NICKEL	11.40
10	RWANDA	PYRETHRUM	9.70
11	SPAIN	FLUOROPAR ACID	6.93
12	EAST AFRICA	FLUOROPAR ACID	4.76
13	ITALY	FLUOROPAR ACID	4.55
14	DOM. REPUB.	NICKEL	4.13
15	U.S.	FLUOROPAR ACID	3.72
16	INDONESIA	NICKEL	2.28
17	PHILIPPINES	NICKEL	2.28
18	U.S.	COPPER	2.24
19	USSR	NICKEL	2.23
20	THAILAND	FLUOROPAR ACID	2.01
21	CANADA	COPPER	2.17
22	SOUTH AFRICA	NICKEL	1.74
23	UK	PYRETHRUM	1.56
24	GUATAMALA	NICKEL	1.10
25	SOUTH AFRICA	PYRETHRUM	0.47
26	AUSTRALIA	PYRETHRUM	0.45
27	FINLAND	NICKEL	0.22
28	GREECE	NICKEL	0.13
29	YUGOSLAVIA	NICKEL	0.11
30	NETHERLANDS	NICKEL	0.04
31	FRG	NICKEL	0.02
32	MALAYSIA	TIN	0.00
33	PRC	TIN	0.00
34	BRAZIL	TIN	0.00
35	BOLIVIA	TIN	0.00
36	UK	TIN	0.00
37	INDONESIA	TIN	0.00
38	THAILAND	TIN	0.00
39	U.S.	TIN	0.00
40	AUSTRALIA	TIN	0.00
41	CANADA	NICKEL	21.78
42	AUSTRALIA	NICKEL	11.40
43	PHILIPPINES	NICKEL	2.28
44	SOUTH AFRICA	NICKEL	1.74
45	FINLAND	NICKEL	0.22
46	MALAYSIA	TIN	0.00
47	PRC	TIN	0.00

SCENARIO 15

WEIGHTS on REGION by LEVEL of CONFLICT and MEDIA

Level of Conflict & Media 1										
Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	7.0	5.0	7.0	2.0	2.0	5.0	2.0	4.0
/COEF	0.1786	0.1786	0.1250	0.0833	0.1250	0.0357	0.0357	0.0833	0.0357	0.1071
Level of Conflict & Media 2										
Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	9.0	4.0	7.0	5.0	1.0	8.0	7.0	5.0
/COEF	0.1333	0.1333	0.1200	0.0553	0.0983	0.0667	0.0133	0.1067	0.0911	0.0617
/COEF	0.1200									
Level of Conflict & Media 3										
Region	1	2	3	4	5	6	7			
Weight	10.0	10.0	10.0	8.0	6.0	4.0	8.0			
/COEF	0.1786	0.1786	0.1786	0.1429	0.1071	0.0714	0.1429			
Level of Conflict & Media 4										
Region	1	2	3	4						
Weight	10.0	4.0	2.0	1.0						
/COEF	0.5882	0.2353	0.1176	0.0588						

INFLUENCE COEFFICIENTS OVER ALL LEVEL OF CONFLICTS

or the Importance of Controlling EACH Region within its own Media

Media 1										
Region	1	2	3	4	5	6	7	8	9	10
/COEF	0.0212	0.0229	0.0160	0.0114	0.0140	0.0046	0.0046	0.0114	0.0140	0.0157
Media 2										
Region	1	2	3	4	5	6	7	8	9	10
/COEF	0.0171	0.0171	0.0154	0.0068	0.0119	0.0085	0.0017	0.0136	0.0119	0.0085
/COEF	0.0154									
Media 3										
Region	1	2	3	4	5	6	7			
/COEF	0.0228	0.0228	0.0228	0.0183	0.0137	0.0091	0.0183			
Media 4										
Region	1	2	3	4						
/COEF	0.0752	0.0301	0.0150	0.0075						
Importance of controlling ANY Region within its Media as compared to the Importance of controlling ANY Region of any other Media										
Media 1										
Region	1	2	3	4	5	6	7	8	9	10
/COEF	0.0099	0.0099	0.0070	0.0050	0.0070	0.0020	0.0020	0.0050	0.0020	0.0060
Media 2										
Region	1	2	3	4	5	6	7	8	9	10
/COEF	0.0037	0.0037	0.0033	0.0015	0.0026	0.0019	0.0004	0.0030	0.0026	0.0019
/COEF	0.0033									
Media 3										
Region	1	2	3	4	5	6	7			
/COEF	0.0060	0.0060	0.0060	0.0048	0.0036	0.0024	0.0048			
Media 4										
Region	1	2	3	4						
/COEF	0.0065	0.0026	0.0013	0.0007						

FORCE ELEMENT IMPORTANCE
(LOC 3)

RANKING	ELEMENT NUMBER	FORCE ELEMENT NAME	CALCULATED VALUE	NORMALIZED VALUE
1	17	CARRIER BATTLE GROUP	0.141	10.00
2	1	AIR INTERDICTION	0.117	8.24
3	3	ARMY GROUND	0.104	7.56
4	16	ATTACK SUB	0.072	5.13
5	19	SURFACE COMBATANTS	0.060	4.24
6	17	THEATER NON-LEAF WEAPON	0.054	3.81
7	6	RAPID DEPLOY	0.052	3.70
8	6	CAS	0.044	3.13
9	14	ASW(LAND BASED)	0.043	3.06
10	22	AIR SUPERIORITY(LAND BASED)	0.041	2.91
11	13	ASW(SEA BASED)	0.037	2.69
12	23	AIR SUPERIORITY(SHIP BASED)	0.032	2.28
13	21	AIR DEFENSE(SHIP BASED)	0.029	2.01
14	10	STRATEGIC BOMBER	0.020	1.44
15	25	SPACE BASED WEAPON(AIR CNTRL)	0.020	1.44
16	29	ASAT(SPACE BASED)	0.013	0.91
17	18	MINE WARFARE	0.013	0.91
18	2	AMPHIBIOUS ASSAULT	0.011	0.75
19	13	SPECIAL OPERATIONS	0.010	0.72
20	23	ASAT(LAND BASED)	0.007	0.51
21	20	AIR DEFENSE(LAND BASED)	0.004	0.28
22	9	SPACE BASED WEAPON(LND CNTRL)	0.003	0.21
23	30	SPACE BASED WEAPON(SEA CNTRL)	0.002	0.11
24	27	ASW(SEA BASED)	0.000	0.00
25	26	ADM(LAND BASED)	0.000	0.00
26	24	INTERCEPTOR AIRCRAFT	0.000	0.00
27	11	SLBM	0.000	0.00
28	7	ICBM	0.000	0.00
29	5	CIVIL DEFENSE	0.000	0.00
30	4	CDW	0.000	0.00

COMBATTANT IMPORTANCE
(LOC 3)

COBALT

AIR INTERDICTION	5.71
ARMY GROUND	4.52
CAS	1.70
ICBM	0.00
STRATEGIC BOMBER	1.79
SLBM	0.00
ASW(SEA BASED)	1.27
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.23
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ASAT(LAND BASED)	0.51

34.99

TIN

AIR INTERDICTION	5.90
ARMY GROUND	1.92
CAS	1.91
STRATEGIC BOMBER	1.79
ASW(LAND BASED)	3.08
ASW(SEA BASED)	1.11
ATTACK SUBS	5.11
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
	41.18

NICKEL

AIR INTERDICTION	5.60
ARMY GROUND	4.92
CAS	1.72
STRATEGIC BOMBER	1.79
ASW(SEA BASED)	1.71
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
	41.21

COMMODITY NORMALIZED IMPORTANCE

NICKEL	10.00	(41.21
TIN	9.99	(41.1
FLUORSPAR ACID	9.60	(34.57
COBALT	8.49	(34.94
PYRETHRUM	4.14	(17.09

FLUORSPAR ACID

AIR INTERDICTION	7.13
AMPHIBIOUS ASSAULT	0.76
ARMY GROUND	3.69
CAS	2.05
ICBM	0.00
STRATEGIC BOMBER	1.79
SLBM	0.00
ASW(LAND BASED)	3.08
ASW(SEA BASED)	1.63
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
	39.57

COBALT		
A-10	CAS	71 7341
COBRA	CAS	41 41 1
F-4	AIR INTERDICTION	103 5150
	CAS	71 7341
F-16	AIR INTERDICTION	71 7341
	CAS	40 4075
ART ACFT	CAS	3 6367
RADIO RLY	AIR INTERDICTION	3 2345
	CAS	2 7275
F-111	AIR INTERDICTION	129 38 3
A-6	AIR INTERDICTION	38 8144
F-15	AIR INTERDICTION	57 5079
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	43 1271
F-18	AIR INTERDICTION	71 8745
SH-3	ASW(SEA BASED)	6 0770
SH-2	ASW(SEA BASED)	15 1937
SH-60B	ASW(SEA BASED)	23 6346
S-3	ASW(SEA BASED)	34 7284
ATT. SUBS	ASW(SEA BASED)	24 1169
FRIGATES	ASW(SEA BASED)	14 4701
DESTROYERS	ASW(SEA BASED)	8 6871
M-48	ARMY GROUND	37 9669
M-60	ARMY GROUND	61 0187
M-1	ARMY GROUND	67 7980
M-551	ARMY GROUND	0 2260
M-901	ARMY GROUND	54 2384
M-2/M-3	ARMY GROUND	47 4536
M-113	ARMY GROUND	5 2731
MLRS	ARMY GROUND	20 3394
TOWED ART.	ARMY GROUND	27 1192
SELF-PROP.	ARMY GROUND	34 1599
PERSHING	ARMY GROUND	18 0795
GLCMs	ARMY GROUND	30 1924
INFANTRY	ARMY GROUND	7 5331
MORTERS	ARMY GROUND	36 9122
ROLES LNCH	ARMY GROUND	1 5820

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6216
F-18	5.5756
M-1	5.2402
M-60	4.7162
F-15	4.4444
M-901	4.1921
A-7	4.0000
COBRA	3.7478
M-2/M-3	3.6681
F-14	3.3333
A-6	3.0000
M-48	2.9345
MORTERS	2.8530
SELF-PROP.	2.7948
S-3	2.6842
GLCMs	2.3290
TOWED ART	2.0971
ATT. SUBS	1.8640
SH-60B	1.8267
MLRS	1.5721
PERSHING	1.3974
SH-2	1.1743
FRIGATES	1.1184
DESTROYERS	0.6710
INFANTRY	0.5322
SH-3	0.4797
RADIO RLY	0.4603
M-113	0.4074
ART ACFT	0.2711
ROLES LNCH	0.1603
M-551	0.0000

TJN		
A-10	CAS	21 7004
COBRA	CA	24 1501
F-4	AIR INTERDICTION	100 5000
	CAS	1 2700
F-16	AIR INTERDICTION	71 5180
	CAS	41 4070
ART. ACFT	CAS	3 4347
RADIO RLY	AIR INTERDICTION	3 2345
	CAS	3 7275
F-111	AIR INTERDICTION	128 3513
A-6	AIR INTERDICTION	43 6442
F-15	AIR INTERDICTION	57 5008
A-7	AIR INTERDICTION	51 7520
F-14	AIR INTERDICTION	48 5180
F-18	AIR INTERDICTION	81 8110
SH-3	ASW(SEA BASED)	0 2049
SH-2	ASW(SEA BASED)	13 0231
SH-60F	ASW(SEA BASED)	20 2511
S-3	ASW(SEA BASED)	34 7284
ATT. SUBS	ASW(SEA BASED)	14 4701
FRIGATES	ASW(SEA BASED)	14 4701
DESTROYERS	ASW(SEA BASED)	8 6321
M-4A	ARMY GROUND	4 2185
M-40	ARMY GROUND	6 7780
M-1	ARMY GROUND	37 6455
M-101	ARMY GROUND	0 0701
M-901	ARMY GROUND	6 7788
M-208-3	ARMY GROUND	6 7730
M-11P	ARMY GROUND	0 7533
MLRS	ARMY GROUND	10 1697
TOWED ART.	ARMY GROUND	4 5199
SELF-PROP.	ARMY GROUND	6 0134
PERSHING	ARMY GROUND	15 8190
GLCMs	ARMY GROUND	26 3459
INFANTRY	ARMY GROUND	60 2649
MORTARS	ARMY GROUND	5 2732
ROLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
F-18	6.2500
A-10	5.6216
COBRA	4.9970
INFANTRY	4.6579
F-15	4.4444
A-7	4.0000
F-14	3.7500
A-6	3.3750
M-1	2.9112
S-3	2.6842
GLCMs	2.0378
SH-60F	1.5658
PERSHING	1.2217
FRIGATES	1.1194
ATT. SUBS	1.1184
SH-2	1.0066
MLRS	0.7870
DESTROYERS	0.6710
M-2/M-3	0.5240
M-901	0.5240
M-60	0.5240
SELF-PROP.	0.4658
RADIO RLY	0.4608
MORTARS	0.4076
SH-3	0.4016
TOWED ART.	0.3493
M-4A	0.3271
ART. ACFT	0.2811
M-11P	0.0670
ROLES LNCH	0.0175
F-111	1.0000

NICHEL		
A-10	CAS	72 7271
C-130A	CAS	47 4871
F-4	AIR INTERDICTION	77 6298
	CAS	5 4550
F-16	AIR INTERDICTION	71 8745
	CAS	41 4078
ART. ACFT	CAS	2 4245
RADIO BLAY	AIR INTERDICTION	3 2345
	CAS	2 7275
F-111	AIR INTERDICTION	129 8812
A-6	AIR INTERDICTION	38 8144
F-15	AIR INTERDICTION	57 5018
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	48 5180
F-18	AIR INTERDICTION	80 8136
SH-3	ASW(SEA BASED)	6 9437
SH-2	ASW(SEA BASED)	17 3842
SH-60B	ASW(SEA BASED)	27 0109
S-3	ASW(SEA BASED)	34 7284
ATT. SUBS	ASW(SEA BASED)	43 4104
FRIGATES	ASW(SEA BASED)	26 0463
DESTROYERS	ASW(SEA BASED)	15 6272
M-41	ARMY GROUND	42 1854
M-40	ARMY GROUND	67 7510
M-1	ARMY GROUND	75 3311
M-551	ARMY GROUND	0 7531
M-901	ARMY GROUND	47 4586
M-2/M-3	ARMY GROUND	54 2304
M-113	ARMY GROUND	5 2732
MLRS	ARMY GROUND	20 3394
TOWED ART	ARMY GROUND	36 1589
SELF-PROP	ARMY GROUND	48 2119
HERSHING	ARMY GROUND	18 0795
GLCMs	ARMY GROUND	22 3993
INFANTRY	ARMY GROUND	37 6455
MORTERS	ARMY GROUND	15 8193
COLES LINC	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6737
F-4	6.4216
F-18	6.2500
M-1	5.8224
A-10	5.6216
M-60	5.2402
F-15	4.4444
M-2/M-3	4.1921
A-7	4.0000
F-14	3.7500
COBRA	3.7473
SELF-PROP.	3.7263
M-901	3.6481
ATT. SUBS	3.5152
M-48	3.2609
A-6	3.0000
INFANTRY	2.9112
TOWED ART.	2.7248
S-3	2.6842
SH-60B	2.0877
FRIGATES	2.0131
GLCMs	1.7467
MLRS	1.5721
HERSHING	1.8974
SH-2	1.3421
MORTERS	1.2127
DESTROYERS	1.2077
SH-3	0.9338
RADIO BLAY	0.4603
M-113	0.4076
ART. ACFT	0.1924
M-551	0.0582
COLES LINC	0.0175

FLUORSPAR ACID		
A-10	CAS	90 9170
COBRA	CAS	48 4881
F-4	AIR INTERDICTION	124 8410
	CAS	9 0917
F-16	AIR INTERDICTION	80 8481
	CAS	50 5084
ART. ACRFT	CAS	3 6367
RADIO FLAY	AIR INTERDICTION	3 2315
	CAS	2 7275
F-111	AIR INTERDICTION	161 7166
A-6	AIR INTERDICTION	48 5180
F-15	AIR INTERDICTION	71 8780
A-7	AIR INTERDICTION	64 6806
F-14	AIR INTERDICTION	53 9089
F-18	AIR INTERDICTION	89 8481
SH-3	ASW (SEA BASED)	6 8411
SH-2	ASW (SEA BASED)	17 8642
SH-60B	ASW (SEA BASED)	38 7617
S-3	ASW (SEA BASED)	43 4104
ATT. SUBS	ASW (SEA BASED)	28 9403
FRIGATES	ASW (SEA BASED)	20 2582
DESTROYERS	ASW (SEA BASED)	12 1547
M-48	ARMY GROUND	12 6006
M-60	ARMY GROUND	20 3894
M-1	ARMY GROUND	22 5813
M-55-1	ARMY GROUND	0 0160
M-901	ARMY GROUND	54 2384
		54 2314
M-2/M-3	ARMY GROUND	6 0265
M-118	ARMY GROUND	14 9481
MLRS	ARMY GROUND	22 5893
TOWED ART.	ARMY GROUND	30 1374
SELF-PROP.	ARMY GROUND	15 8195
PERISHING	ARMY GROUND	26 3659
GLCMS	ARMY GROUND	60 2649
INFANTRY	ARMY GROUND	26 3659
MURTERS	ARMY GROUND	0 2260
ROLES LNCH	ARMY GROUND	

	NORMALIZED VALUES
F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6216
F-18	5.5556
F-15	4.4444
A-7	4.0000
INFANTRY	3.7243
M-2/M-3	3.3537
M-901	3.2537
F-14	3.3333
A-6	3.0000
COBRA	2.9982
S-3	2.6842
SH-60B	2.0877
SELF-PROP.	1.8632
ATT. SUBS	1.7895
MURTERS	1.6303
GLCMS	1.6303
TOWED ART.	1.3974
M-1	1.3974
M-60	1.2776
FRIGATES	1.2526
SH-2	1.0737
MLRS	1.0480
PERISHING	0.9782
M-48	0.7825
DESTROYERS	0.7516
SH-3	0.4795
M-118	0.3726
RADIO FLAY	0.3686
ART. ACRFT	0.3249
ROLES LNCH	0.0140
M-55-1	0.0129

PERCENTAGE

ATT. SUBS	ASW (SEA BASED)	14.4701
M-48	ARMY GROUND	39.5128
M-60	ARMY GROUND	47.4566
M-113	ARMY GROUND	5.2732
TOWED ART.	ARMY GROUND	31.6390
SELF-PROP.	ARMY GROUND	42.1884
INFANTRY	ARMY GROUND	75.3311
MORTERS	ARMY GROUND	36.9122

NORMALIZED VALUES

INFANTRY	10.0000
M-60	6.3000
SELF-PROP.	5.6000
MORTERS	4.9000
TOWED ART.	4.2000
M-48	3.9200
ATT. SUBS	1.9200
M-113	0.7000

ALL COMMODITIES

A-10	CAS	3 0012
COBRA	CAS	3 1012
F-4	AIR INTERDICTION	4 1402
	CAS	0 2909
F-16	AIR INTERDICTION	3 0748
	CAS	1 7108
ART. ACFT	CAS	0 1333
RADIO RLY	AIR INTERDICTION	0 1294
	CAS	0 1091
F-111	AIR INTERDICTION	5 4987
A-6	AIR INTERDICTION	1 6981
F-15	AIR INTERDICTION	2 4439
A-7	AIR INTERDICTION	2 1995
F-14	AIR INTERDICTION	1 9007
F-18	AIR INTERDICTION	3 2345
SH-3	ASW(SEA BASED)	0 2512
SH-2	ASW(SEA BASED)	0 6295
SH-60B	ASW(SEA BASED)	1 0467
S-3	ASW(SEA BASED)	1 4760
ATT. SUBS	ASW(SEA BASED)	1 2541
FRIGATES	ASW(SEA BASED)	0 7524
DESTROYERS	ASW(SEA BASED)	0 4513
M-48	ARMY GROUND	1 2656
M-60	ARMY GROUND	2 0339
M-1	ARMY GROUND	2 0339
M-551	ARMY GROUND	0 0113
M-901	ARMY GROUND	1 6272
M-2/M-3	ARMY GROUND	1 6272
M-113	ARMY GROUND	0 2267
NLRE	ARMY GROUND	0 6780
TOWED ART.	ARMY GROUND	1 2204
SELF-PROP.	ARMY GROUND	1 6272
PERFINS	ARMY GROUND	0 6780
GLCS	ARMY GROUND	1 0546
INFANTRY	ARMY GROUND	2 4106
MORTERS	ARMY GROUND	1 2108
ROLES LNCH	ARMY GROUND	0 0226

NORMALIZED VALUES	
F-111	10 0000
F-16	8 6787
F-4	3 0585
F-18	5 3874
A-10	5 6216
F-15	4 4444
INFANTRY	4 3839
A-7	4 0000
COBRA	3 8213
M-1	3 6989
M-60	3 6989
F-14	3 1294
A-6	3 0882
SELF-PROP.	2 9592
M-2/M-3	2 9592
M-901	2 9592
S-3	2 7842
M-48	2 3016
ATT. SUBS	2 2807
TOWED ART.	2 2194
MORTERS	2 2057
GLCS	1 9180
SH-60B	1 9035
FRIGATES	1 8684
PERFINS	1 8330
MLRS	1 8330
SH-2	1 1447
DESTROYERS	0 8210
SH-3	0 4579
RADIO RLY	0 4317
M-113	0 4110
ART. ACFT	0 3423
ROLES LNCH	0 0411
F-111	0 0213

CRITICALITY OF SHORTFALL
ALL FEES
(LOC 3)

COMMODITY	GOAL (UNITS)	STOCK FILE (UNITS)	SHORT FALL (UNITS)	TRANS- LATED	FEZ COMMODITY IMPORT.	CRITICALITY	NUMERICAL
COBALT	85.4	43.8	-41.7	402.0	8.5	3418.1	7.4
TIN	42.0	190.6	352.8	0.0	10.0	0.0	0.0
NICKEL	200.0	32.2	-83.9	437.7	10.0	4377.1	10.0
FLUORSPAR ACID	1400.0	890.0	-36.1	399.9	9.6	3744.3	3.6
MYRETHRUM	500.0	0.0	-100.0	403.8	4.1	1850.7	4.1

COMPOSITE IMPORTANCE
(LOC 3)

COBALT

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
HAIRE	9000.	51.43	0.71	1.404	72.185
AMIA	2900.	16.57	0.71	1.404	28.200
ALGERIA	1100.	6.29	2.39	0.346	2.175
U.S.	4500.	25.71	2.56	0.391	10.000
TOTAL	17500.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

TIN

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
AUSTRALIA	100.	0.15	0.92	1.087	0.141
U.S.	16100.	23.82	2.56	0.391	9.319
THAILAND	5900.	8.73	0.92	1.087	9.483
INDONESIA	5800.	8.58	0.92	1.087	9.322
UK	100.	0.15	1.96	0.510	0.075
BOLIVIA	10300.	15.24	0.98	1.020	15.548
BRAZIL	2400.	3.55	0.86	1.162	4.125
INDONESIA	3000.	4.44	2.47	0.405	1.796
MALAYSIA	23900.	35.36	0.92	1.087	38.414
TOTAL	67600.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

NICKEL

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1000.	0.33	1.92	0.520	0.171
SOUTH AFRICA	5000	1.64	1.19	0.841	1.301
PHILIPPINES	5000	1.64	0.92	1.087	1.781
AUSTRALIA	20000.	8.21	0.92	1.087	8.914
CANADA	150000.	49.28	2.89	0.346	17.054
U.S.	89000	29.91	2.56	0.391	11.301
GREECE	600.	0.20	1.96	0.510	0.101
NETHERLANDS	200	0.07	1.96	0.510	0.007
FRG	100	0.03	1.96	0.510	0.003
YUGOSLAVIA	500	0.16	1.96	0.510	0.0054
USSR	5000	1.64	0.94	1.041	1.741
COM. REFUE	15000.	4.93	1.53	0.656	3.206
GUATEMALA	4000.	1.31	1.53	0.656	0.801
INDONESIA	5000	1.64	0.92	1.087	1.701
TOTAL:	304400.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

FLUORSPAR 4011

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	180.	21.46	1.19	0.841	18.801
U.S.	70.	8.70	2.56	0.391	3.402
ITALY	60	8.07	1.96	0.510	4.120
FRANCE	100.	12.41	1.96	0.510	6.316
EAST AFRICA	25.	3.11	0.71	1.404	4.308
THAILAND	15.	1.86	0.92	1.087	2.008
MEXICO	350	43.46	2.56	0.391	17.011
TOTAL:	805.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

PYRETHRUM

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	2000.	1.01	1.19	0.841	0.852
AUSTRALIA	1500.	0.76	0.92	1.087	0.810
FRG	11000.	5.57	1.96	0.510	2.848
KENYA	80000.	40.51	0.71	1.404	56.805
RWANDA	25000.	12.66	0.71	1.404	17.767
TANZANIA	78000.	39.49	0.71	1.404	53.438
TOTAL:	197500.	100.00			

SOURCE IMPORTANCE
(L00 3)

SOURCE	% (1/01) CUM. INF.	FE/CHORTAIL CRITICALITY	TOTAL	NORMA 10 11
COBALT				
ZAIRE	72.184	7.81	543.70	100.00
ZAMBIA	23.280	7.81	181.64	32.20
CANADA	2.175	7.81	16.98	3.01
U.S.	10.061	7.81	78.57	13.94
TIN				
AUSTRALIA	0.161	0.00	0.00	0.00
U.S.	9.319	0.00	0.00	0.00
THAILAND	9.483	0.00	0.00	0.00
INDONESIA	9.322	0.00	0.00	0.00
UK	0.075	0.00	0.00	0.00
BOLIVIA	15.548	0.00	0.00	0.00
BRAZIL	4.125	0.00	0.00	0.00
PRC	1.796	0.00	0.00	0.00
MALAYSIA	39.414	0.00	0.00	0.00
NICKEL				
FINLAND	0.171	10.00	1.71	0.30
SOUTH AFRICA	1.381	10.00	13.81	2.43
PHILIPPINES	1.725	10.00	17.25	3.17
AUSTRALIA	9.924	10.00	89.24	15.97
CANADA	17.054	10.00	170.54	30.20
U.S.	11.311	10.00	113.11	20.07
GREECE	0.101	10.00	1.01	0.18
NETHERLANDS	0.034	10.00	0.34	0.06
FRG	0.017	10.00	0.17	0.03
YUGOSLAVIA	0.084	10.00	0.84	0.15
USSR	1.742	10.00	17.42	3.09
DOM. REPUB.	3.230	10.00	32.30	5.73
GUATAMALA	0.861	10.00	8.61	1.53
INDONESIA	1.785	10.00	17.85	3.17
FLUORSPAR ACID				
SOUTH AFRICA	18.803	8.55	160.85	28.53
U.S.	3.402	8.55	29.10	5.16
ITALY	4.120	8.55	35.24	6.25
SPAIN	6.338	8.55	54.22	9.62
EAST AFRICA	4.359	8.55	37.29	6.61
THAILAND	2.025	8.55	17.32	3.07
MEXICO	17.011	8.55	145.52	25.82
PYRETHRUM				
SOUTH AFRICA	0.852	4.30	3.66	0.65
AUSTRALIA	0.825	4.30	3.55	0.63
UK	2.842	4.30	12.21	2.17
KENYA	56.855	4.30	244.29	43.34
RWANDA	17.767	4.30	76.34	13.54
TANZANIA	55.433	4.30	238.18	42.25

SOURCE IMPORTANCE
RANKED BY SOURCE
(LOC 3)

#	SOURCE	COMMODITY	VALUE
1	ZAIRE	COBALT	100.00
2	KENYA	PYRETHRUM	43.34
3	TANZANIA	PYRETHRUM	42.25
4	ZAMBIA	COBALT	32.22
5	CANADA	NICKEL	30.25
6	SOUTH AFRICA	FLUORSPAR ACID	20.50
7	MEXICO	FLUORSPAR ACID	20.50
8	U S	NICKEL	20.00
9	AUSTRALIA	NICKEL	15.83
10	U S	COBALT	13.47
11	RUANDA	PYRETHRUM	12.54
12	SPAIN	FLUORSPAR ACID	8.42
13	EAST AFRICA	FLUORSPAR ACID	6.61
14	ITALY	FLUORSPAR ACID	6.21
15	DOM. REPUB	NICKEL	5.70
16	U S	FLUORSPAR ACID	5.14
17	INDONESIA	NICKEL	3.17
18	PHILIPPINES	NICKEL	3.11
19	USSR	NICKEL	3.09
20	THAILAND	FLUORSPAR ACID	3.00
21	CANADA	COBALT	3.00
22	SOUTH AFRICA	NICKEL	2.40
23	UK	PYRETHRUM	2.17
24	GUATAMALA	NICKEL	1.50
25	SOUTH AFRICA	PYRETHRUM	0.65
26	AUSTRALIA	PYRETHRUM	0.63
27	FINLAND	NICKEL	0.30
28	GREECE	NICKEL	0.18
29	YUGOSLAVIA	NICKEL	0.15
30	NETHERLANDS	NICKEL	0.06
31	FRG	NICKEL	0.03
32	MALAYSIA	TIN	0.00
33	PRC	TIN	0.00
34	BRAZIL	TIN	0.00
35	BOLIVIA	TIN	0.00
36	UK	TIN	0.00
37	INDONESIA	TIN	0.00
38	THAILAND	TIN	0.00
39	U S	TIN	0.00
40	AUSTRALIA	TIN	0.00
41	CANADA	NICKEL	30.25
42	AUSTRALIA	NICKEL	15.83
43	PHILIPPINES	NICKEL	3.17
44	SOUTH AFRICA	NICKEL	2.45
45	FINLAND	NICKEL	0.30
46	MALAYSIA	TIN	0.00
47	PRC	TIN	0.00

SCENARIO 16

WEIGHTS on REGION by LEVEL of CONFLICT and MEDIA

Level of Conflict 3 Media 1

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	7.0	5.0	7.0	10.0	2.0	5.0	2.0	4.0
COEF	0.1562	0.1562	0.1094	0.0791	0.1094	0.1562	0.0312	0.0791	0.0312	0.0791

Level of Conflict 3 Media 2

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	9.0	4.0	7.0	5.0	10.0	8.0	7.0	5.0
Weight	9.0									
COEF	0.1190	0.1190	0.1071	0.0476	0.0833	0.0595	0.1190	0.0952	0.0813	0.0595
COEF	0.1071									

Level of Conflict 3 Media 3

Region	1	2	3	4	5	6	7
Weight	10.0	10.0	10.0	10.0	6.0	4.0	10.0
COEF	0.1667	0.1667	0.1667	0.1667	0.1000	0.0667	0.1667

Level of Conflict 3 Media 4

Region	1	2	3	4
Weight	10.0	4.0	2.0	1.0
COEF	0.5832	0.2303	0.1174	0.0588

INFLUENCE COEFFICIENTS OVER ALL LEVEL OF CONFLICTS

on the Importance of Controlling EACH region within its own Media

Media	1	2	3	4	5	6	7	8	9	10
Media 1										
COEF	0.0200	0.0200	0.0140	0.0100	0.0140	0.0200	0.0040	0.0100	0.0040	0.0100

Media	1	2	3	4	5	6	7	8	9	10
Media 2										
COEF	0.0152	0.0152	0.0137	0.0041	0.0107	0.0076	0.0152	0.0122	0.0107	0.0076
COEF	0.0137									

Media	1	2	3	4	5	6	7
Media 3							
COEF	0.0213	0.0213	0.0213	0.0213	0.0126	0.0013	0.0213

Media	1	2	3	4
Media 4				
COEF	0.0752	0.0301	0.0150	0.0075

Media	1	2	3	4
Media 5				
COEF	0.0752	0.0301	0.0150	0.0075

Importance of controlling ANY Region within its Media as compared to the Importance of controlling ANY Region of any other Media

Media	1	2	3	4	5	6	7	8	9	10
Media 1										
COEF	0.0087	0.0087	0.0061	0.0043	0.0061	0.0087	0.0017	0.0043	0.0017	0.0052

Media	1	2	3	4	5	6	7	8	9	10
Media 2										
COEF	0.0033	0.0033	0.0030	0.0013	0.0023	0.0017	0.0033	0.0026	0.0023	0.0017
COEF	0.0030									

Media	1	2	3	4	5	6	7
Media 3							
COEF	0.0056	0.0056	0.0056	0.0056	0.0033	0.0022	0.0056

Media	1	2	3	4
Media 4				
COEF	0.0065	0.0026	0.0013	0.0007

Media	1	2	3	4
Media 5				
COEF	0.0065	0.0026	0.0013	0.0007

FORCE ELEMENT IMPORTANCE
(LOC 3)

RANKING	ELEMENT NUMBER	FORCE ELEMENT NAME	CALCULATED VALUE	NORMALIZED VALUE
1	17	CARRIER BATTLE GROUP	0.139	10.000
2	1	AIR INTERDICTION	0.110	7.889
3	3	ARMY GROUND	0.095	6.840
4	18	ATTACK SUB	0.073	5.227
5	19	SURFACE COMBATANTS	0.060	4.290
6	8	RAPID DEPLOY	0.058	4.144
7	12	THEATER NUCLEAR WEAPON	0.054	3.889
8	14	ASW(LAND BASED)	0.043	3.093
9	6	CAS	0.040	2.901
10	22	AIR SUPERIORITY(LAND BASED)	0.038	2.730
11	15	ASW(SEA BASED)	0.032	2.310
12	23	AIR SUPERIORITY(SHIP BASED)	0.030	2.160
13	21	AIR DEFENSE(SHIP BASED)	0.027	1.954
14	10	STRATEGIC BOMBER	0.025	1.760
15	25	SPACE BASED WEAPON(AIR CNTRL)	0.019	1.384
16	13	SPECIAL OPERATIONS	0.015	1.050
17	29	ASAT(SPACE BASED)	0.013	0.935
18	18	MINE WARFARE	0.013	0.914
19	2	AMPHIBIOUS ASSAULT	0.010	0.719
20	28	ASAT(LAND BASED)	0.007	0.516
21	20	AIR DEFENSE(LAND BASED)	0.004	0.294
22	9	SPACE BASED WEAPON(LAND CNTRL)	0.003	0.202
23	30	SPACE BASED WEAPON(SEA CNTRL)	0.002	0.119
24	27	ARM(SPACE BASED)	0.000	0.000
25	26	ARM(LAND BASED)	0.000	0.000
26	24	INTERCEPTOR AIRCRAFT	0.000	0.000
27	11	SLEM	0.000	0.000
28	7	ICBM	0.000	0.000
29	5	CIVIL DEFENSE	0.000	0.000
30	4	CBW	0.000	0.000

COMMODITY IMPORTANCE
(LOC 3)

COBALT

AIR INTERDICTION	5.44
ARMY GROUND	4.19
CAS	1.62
ICBM	0.00
STRATEGIC BOMBER	1.76
SLEM	0.00
ASW(SEA BASED)	1.27
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
ASAT(LAND BASED)	0.52

33.99

TIN

AIR INTERDICTION	5.42
ARMY GROUND	1.78
CAS	1.71
STRATEGIC BOMBER	1.76
ASW(LAND BASED)	3.09
ASW(SEA BASED)	1.11
ATTACK SUBS	5.23
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.92
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
	40.47

NICKEL

AIR INTERDICTION	5.91
ARMY GROUND	4.56
CAS	1.60
STRATEGIC BOMBER	1.76
ASW(SEA BASED)	1.71
ATTACK SUBS	5.23
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.92
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
	40.30

PYRETHRUM

ARMY GROUND	2.41
CIVIL DEFENSE	0.00
ASW(SEA BASED)	0.14
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.29
	16.84

FLUORSPAR ACID

AIR INTERDICTION	6.79
AMPHIBIOUS ASSAULT	0.71
ARMY GROUND	3.42
CAS	1.90
ICBM	0.00
STRATEGIC BOMBER	1.76
SLBM	0.00
ASW(LAND BASED)	3.09
ASW(SEA BASED)	1.63
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
	38.50

COMMODITY NORMALIZED IMPORTANCE

TIN	10.00	(40.47)
NICKEL	9.96	(40.30)
FLUORSPAR ACID	9.51	(38.50)
COBALT	8.40	(33.50)
PYRETHRUM	4.18	(16.84)

COBALT		
A-10	CAS	67 4028
COBRA	CAS	44 3511
F-4	AIR INTERDICTION	98 5102
	CAS	6 7403
F-16	AIR INTERDICTION	11 4188
	CAS	37 4430
ART. ACFT	CAS	3 3701
RADIO RLAY	AIR INTERDICTION	3 0788
	CAS	2 5176
F-111	AIR INTERDICTION	113 1511
A-6	AIR INTERDICTION	33 3131
F-15	AIR INTERDICTION	54 7335
A-7	AIR INTERDICTION	49 2901
F-14	AIR INTERDICTION	41 0501
F-18	AIR INTERDICTION	68 4188
SH-3	ASW(SEA BASED)	6 0613
SH-2	ASW(SEA BASED)	15 1708
SH-60B	ASW(SEA BASED)	23 5090
S-3	ASW(SEA BASED)	34 6761
ATT. SUBS	ASW(SEA BASED)	24 0807
FRIGATES	ASW(SEA BASED)	14 4484
DESTROYERS	ASW(SEA BASED)	8 6690
M-48	ARMY GROUND	35 1003
M-60	ARMY GROUND	56 3724
M-1	ARMY GROUND	62 8752
M-551	ARMY GROUND	0
M-901	ARMY GROUND	50 2866
M-2/M-3	ARMY GROUND	44 0038
M-113	ARMY GROUND	4 8890
MLRS	ARMY GROUND	18 8575
TOWED ART.	ARMY GROUND	25 1433
SELF-PROP.	ARMY GROUND	33 5244
PERSHING	ARMY GROUND	16 7622
GLCMs	ARMY GROUND	27 9370
INFANTRY	ARMY GROUND	6 9842
MORTERS	ARMY GROUND	34 2223
ROLES LNCH	ARMY GROUND	1 4667

NORMALIZED VALUES	
F-111	10.0000
F-16	8.5962
F-4	8.5473
F-18	5.5596
A-10	5.4732
M-1	5.1042
M-60	4.5938
F-15	4.4444
M-901	4.0834
A-7	4.0000
COBRA	3.6488
M-2/M-3	3.5722
F-14	3.3333
A-6	3.0000
M-48	2.8583
S-3	2.8158
MORTERS	2.7789
SELF-PROP.	2.7232
GLCMs	2.2635
TOWED ART.	2.0417
ATT. SUBS	1.9554
SH-60B	1.9163
MLRS	1.5313
PERSHING	1.3611
SH-2	1.2319
FRIGATES	1.1737
DESTROYERS	0.7099
INFANTRY	0.5671
SH-3	0.4933
RADIO RLAY	0.4571
M-113	0.3370
ART. ACFT	0.2787
ROLES LNCH	0.1491
F-901	0.0000

TIN		
A-10	CAS	67 4008
CIEP	CAS	5 0100
F-4	AIR INTERDICTION	98 5202
	CAS	6 7408
F-16	AIR INTERDICTION	61 4108
	CAS	17 4410
ART ACFT	CAS	3 3701
RADIO RLY	AIR INTERDICTION	3 0708
	CAS	1 5100
F-111	AIR INTERDICTION	128 1508
A-6	AIR INTERDICTION	41 5102
F-15	AIR INTERDICTION	54 7308
A-7	AIR INTERDICTION	48 2001
F-14	AIR INTERDICTION	46 1814
F-18	AIR INTERDICTION	71 3008
SH-3	ASWSEA BASED	5 2014
SH-2	ASWSEA BASED	13 0008
SH-60B	ASWSEA BASED	10 1107
S-3	ASWSEA BASED	34 6761
ATT SUBS	ASWSEA BASED	14 4484
FRIGATES	ASWSEA BASED	14 4484
DESTROYERS	ASWSEA BASED	8 6690
M-41	ARMY GROUND	3 9111
M-60	ARMY GROUND	6 1808
M-1	ARMY GROUND	34 9111
M-551	ARMY GROUND	0 0818
M-901	ARMY GROUND	6 2800
M-2/M-3	ARMY GROUND	6 2808
M-118	ARMY GROUND	0 6901
MLRS	ARMY GROUND	9 4187
TOWED ART	ARMY GROUND	4 1905
SELF-PROP	ARMY GROUND	5 5874
PERSHING	ARMY GROUND	14 6668
GLOMS	ARMY GROUND	24 4448
INFANTRY	ARMY GROUND	75 8740
MORTERS	ARMY GROUND	4 8890
ROLES LNCH	ARMY GROUND	0 2095

NORMALIZED VALUES	
F-111	10.0000
F-16	8.5862
F-4	8.5473
F-18	6.2500
A-10	5.4732
COBRA	4.8651
INFANTRY	4.5371
F-15	4.4444
A-7	4.0000
F-14	3.7500
A-6	3.3750
M-1	2.8357
S-3	2.8158
GLOMS	1.9890
SH-60B	1.6425
PERSHING	1.1919
FRIGATES	1.1782
ATT. SUBS	1.1732
SH-2	1.0559
MLRS	0.7656
DESTROYERS	0.7039
M-2/M-3	0.5104
M-901	0.5104
M-60	0.5104
RADIO RLY	0.4552
SELF-PROP	0.4507
SH-3	0.4234
MORTERS	0.3820
TOWED ART	0.3402
M-41	0.3176
ART ACFT	0.2717
M-118	0.0927
SELF LNCH	0.0130
	0.0001

NICKEL		
A-10	CAS	67 4026
COBRA	CAS	44 9511
F-4	AIR INTERDICTION	73 8902
	CAS	5 0532
F-16	AIR INTERDICTION	63 4163
	CAS	37 4410
ART. ACFT	CAS	2 2469
RADIO FLAY	AIR INTERDICTION	3 0733
	CAS	2 5174
F-111	AIR INTERDICTION	123 1503
A-6	AIR INTERDICTION	34 9451
F-15	AIR INTERDICTION	54 7335
A-7	AIR INTERDICTION	49 2401
F-14	AIR INTERDICTION	46 1814
F-18	AIR INTERDICTION	76 9689
SH-1	ASW(SEA BASED)	6 9101
SH-2	ASW(SEA BASED)	17 3331
SH-60B	ASW(SEA BASED)	26 9703
S-3	ASW(SEA BASED)	34 6761
ATT. SUBS	ASW(SEA BASED)	43 3432
FRIGATES	ASW(SEA BASED)	24 0071
DESTROYERS	ASW(SEA BASED)	15 6043
M-48	ARMY GROUND	35 1113
M-60	ARMY GROUND	62 8532
M-1	ARMY GROUND	69 8415
M-551	ARMY GROUND	0 6914
M-901	ARMY GROUND	44 0008
M-2/M-3	ARMY GROUND	50 2866
M-113	ARMY GROUND	4 8890
MLRS	ARMY GROUND	18 8575
TOWED ART.	ARMY GROUND	33 5244
SELF-PROP.	ARMY GROUND	44 6992
PERSHING	ARMY GROUND	16 7622
GLCMs	ARMY GROUND	20 9527
INFANTRY	ARMY GROUND	34 9212
MORTARS	ARMY GROUND	14 6669
ROLES LNCH	ARMY GROUND	0 2095

NORMALIZED VALUES	
F-111	10.0000
F-16	8.5962
F-4	6.4105
F-18	6.2500
M-1	5.6713
A-10	5.4732
M-60	5.1042
F-15	4.4444
M-2/M-3	4.0834
A-7	4.0000
F-14	3.7500
COBRA	3.6438
SELF-PROP.	3.6296
M-901	3.5729
ATT. SUBS	3.5197
M-48	3.1752
A-6	3.0900
INFANTRY	2.8357
S-3	2.8158
TOWED ART.	2.7222
SH-60B	2.1900
FRIGATES	2.1113
GLCMs	1.7014
MLRS	1.5313
SH-2	1.4079
PERSHING	1.3611
DESTROYERS	1.2671
MORTARS	1.1910
SH-1	0.5432
RADIO FLAY	0.4552
M-113	0.3170
ART. ACFT	0.1814
M-551	0.0547
ROLES LNCH	0.0170

FLUORESPAR ACID		84 2536
A-10	CAS	44 3111
COBRA	CAS	123 1503
F-4	AIR INTERDICTION	3 4272
	CAS	90 5110
F-16	AIR INTERDICTION	41 8075
	CAS	3 3701
ART. ACFT	CAS	3 0788
RADIO BLAY	AIR INTERDICTION	1 5176
	CAS	153 9371
F-111	AIR INTERDICTION	46 1814
A-6	AIR INTERDICTION	68 4168
F-15	AIR INTERDICTION	61 5751
A-7	AIR INTERDICTION	51 3126
F-14	AIR INTERDICTION	80 5010
F-18	AIR INTERDICTION	6 9301
SH-3	ASW(SEA BASED)	17 3131
SH-2	ASW(SEA BASED)	33 7111
SH-60B	ASW(SEA BASED)	43 3452
S-3	ASW(SEA BASED)	28 8968
ATT. SUBS	ASW(SEA BASED)	20 2277
FRIGATES	ASW(SEA BASED)	12 1347
DESTROYERS	ASW(SEA BASED)	11 7335
M-48	ARMY GROUND	13 8575
M-60	ARMY GROUND	20 9517
M-1	ARMY GROUND	0 2095
M-551	ARMY GROUND	50 2366
M-901	ARMY GROUND	50 2366
M-2/M-3	ARMY GROUND	5 5814
M-113	ARMY GROUND	15 7144
MLRS	ARMY GROUND	20 9517
TOWED ART.	ARMY GROUND	27 9370
SELF-PROP.	ARMY GROUND	14 6668
PERSHING	ARMY GROUND	24 4449
GLCMs	ARMY GROUND	24 4449
INFANTRY	ARMY GROUND	55 8740
MORTERS	ARMY GROUND	24 4449
ROLES LNCH	ARMY GROUND	0 2095

	NORMALIZED VALUES
F-111	10 0000
F-16	6 5862
F-4	6 5473
F-18	5 5556
A-10	5 4732
F-15	4 4444
A-7	4 0000
INFANTRY	3 6276
F-14	3 3333
M-2/M-3	3 2667
M-901	3 2667
A-6	3 0000
COBRA	2 9171
S-3	2 8158
SH-60B	2 1900
ATT. SUBS	1 8771
SELF-PROP.	1 8149
MORTERS	1 5880
GLCMs	1 5880
TOWED ART.	1 3611
M-1	1 3611
FRIGATES	1 3140
M-60	1 2750
SH-2	1 1063
MLRS	1 0208
PERSHING	0 9577
DESTROYERS	0 7884
M-48	0 7637
SH-3	0 4505
RADIO BLAY	0 3642
F-111	0 3439
ART. ACFT	0 3111
ROLES LNCH	0 0136
	0 01

HYPERHEUM		
ATT. SUBS	ARMYSEA BASED)	14 4000
M-40	ARMY GROUND	17 3700
M-60	ARMY GROUND	44 0000
M-113	ARMY GROUND	4 8800
TOWED ART	ARMY GROUND	29 3300
SELF-PROP.	ARMY GROUND	22 1110
INFANTRY	ARMY GROUND	43 8400
MORTERS	ARMY GROUND	34 2200

NORMALIZED VALUES

INFANTRY	10.0000
M-40	6.3000
SELF-PROP.	5.6000
MORTERS	4.9000
TOWED ART.	4.2000
M-40	3.5000
ATT. SUBS	2.8000
M-113	0.7000

ALL COMMODITIES		
A-10	CAS	2.8646
COBRA	CAS	1.9471
F-4	AIR INTERDICTION	3.9413
	CAS	0.2696
F-16	AIR INTERDICTION	2.9177
	CAS	1.5115
ART. ACFT	CAS	0.1236
RADIO RLY	AIR INTERDICTION	0.1232
	CAS	0.1011
F-111	AIR INTERDICTION	5.2339
A-6	AIR INTERDICTION	1.6163
F-15	AIR INTERDICTION	1.3262
A-7	AIR INTERDICTION	2.0936
F-14	AIR INTERDICTION	1.8473
F-18	AIR INTERDICTION	3.0789
SH-3	ASW(SEA BASED)	0.2914
SH-2	ASW(SEA BASED)	0.6285
SH-60B	ASW(SEA BASED)	1.0451
S-3	ASW(SEA BASED)	1.4737
ATT. SUBS	ASW(SEA BASED)	1.2522
FRIGATES	ASW(SEA BASED)	0.7513
DISTROYERS	ASW(SEA BASED)	0.4508
M-48	ARMY GROUND	1.1714
M-60	ARMY GROUND	1.8857
M-1	ARMY GROUND	1.8857
M-551	ARMY GROUND	0.0119
M-901	ARMY GROUND	1.5086
M-2/M-3	ARMY GROUND	1.5086
M-113	ARMY GROUND	0.2095
MLRS	ARMY GROUND	0.6216
TOWED ART.	ARMY GROUND	1.1314
SELF-PROP.	ARMY GROUND	1.5013
PERISHING	ARMY GROUND	0.4236
GLOMS	ARMY GROUND	0.9778
INFANTRY	ARMY GROUND	2.2350
MORTERS	ARMY GROUND	1.1243
ROLES LNCH	ARMY GROUND	0.0210

NORMALIZED VALUES	
F-111	10.0000
F-16	8.5962
F-4	8.0445
F-18	5.8324
A-10	5.4732
F-15	4.4444
INFANTRY	4.2702
A-7	4.0000
COBRA	3.7204
M-1	3.6030
M-60	3.6030
F-14	3.5214
A-6	3.0832
M-2/M-3	2.8824
M-901	2.8824
SELF-PROP.	2.8824
S-3	2.8158
ATT. SUBS	2.3925
M-48	2.2418
TOWED ART.	2.1618
MORTERS	2.1434
SH-60B	1.9968
GLOMS	1.8632
FRIGATES	1.4357
PERISHING	1.2010
MLRS	1.2010
SH-2	1.2008
DISTROYERS	0.8613
SH-3	0.4303
RADIO RLY	0.4287
M-113	0.4003
ART. ACFT	0.2361
ROLES LNCH	0.0400
M-551	0.0210

CRITICALITY OF SHORTFALL
ALL FE'S
(LOC 3)

COMMODITY	GOAL (UNITS)	STOCK FILE (UNITS)	SHIFT FALL (%)	TRANS- LATED	FE/ COMMODITY IMPORT	CRITIC- ALITY	NORMALIZED FE/SHORTFALL CRITICALITY
SALT	85.4	43.8	-43.7	402.5	8.4	3372.9	1.5
W	42.0	190.6	373.8	0.0	10.0	10.0	0.1
WHEEL	200.0	32.2	-83.9	437.7	10.0	4358.1	1.0
DIOSPAR ACID	1400.0	895.0	-36.1	389.9	9.5	3708.3	8.5
SETHRUM	500.0	0.0	-100.0	453.8	4.2	1897.6	4.4

COMPOSITE IMPORTANCE
(LOC 3)

COPALT

	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/01	% (1/01)
URCE	1350.	7.71	1.72	0.533	4.477
INLAND	450.	2.57	2.05	0.487	1.211
OROCOO	250.	1.43	1.76	0.569	0.813
OTSWANNA	150.	0.84	2.31	0.432	0.371
OUTH AFRICA	12500.	71.42	1.74	0.513	40.679
IRE	50.	0.29	0.82	1.216	0.347
ILIPPINES	400.	2.29	0.82	1.216	1.729
ESTRALIA	250.	1.43	0.82	1.216	1.737
EW CALEDONIA	1100.	6.29	2.61	0.383	2.405
ANADA	1000.	5.71	2.31	0.432	2.471
TOTAL:	17500.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

TIN

	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/01	% (1/01)
URCE	100.	0.15	0.82	1.216	0.180
USTRALIA	16100.	23.82	2.31	0.432	10.299
S	5900.	8.73	0.82	1.216	10.611
AILAND	5800.	8.58	0.82	1.216	10.431
NDONESIA	100.	0.15	1.76	0.569	0.084
K	10300.	15.24	0.90	1.117	17.014
LIVIA	2400.	3.55	0.90	1.117	3.964
AZIL	3000.	4.44	2.33	0.429	1.905
RC	23900.	35.36	0.82	1.216	42.983
FLAYSIA					
TOTAL:	67600.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

NICKEL

	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
RUSSIA	1000.	0.33	1.72	0.580	1.1
FINLAND	5000.	1.64	2.31	0.432	0.7
SOUTH AFRICA	5000.	1.64	0.82	1.216	1.9
PHILIPPINES	25000.	8.21	0.82	1.216	1.9
AUSTRALIA	150000.	48.28	2.61	0.383	11.3
CANADA	88000.	28.31	2.31	0.412	11.7
GREECE	600.	0.20	1.76	0.569	0.1
NETHERLANDS	200.	0.07	1.76	0.569	0.0
YUGOSLAVIA	500.	0.16	1.76	0.569	0.0
INDONESIA	5000.	1.64	0.82	1.216	1.9
TOTAL:	304400	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

FLUOROSULFONIC ACID

	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
RUSSIA	180.	22.36	2.31	0.432	3.6
SOUTH AFRICA	70.	8.70	2.31	0.432	3.7
ITALY	65.	8.07	1.76	0.569	4.5
CHINA	100.	12.42	1.76	0.569	7.0
SOUTH AFRICA	20.	3.11	1.76	0.569	1.7
FINLAND	15.	1.86	0.82	1.216	2.2
INDONESIA	350.	43.48	2.31	0.432	15.3
TOTAL:	805.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

PYRETHRUM

	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
RUSSIA	2000.	1.01	2.31	0.432	0.4
SOUTH AFRICA	1500.	0.76	0.82	1.216	0.9
AUSTRALIA	11000.	5.57	1.76	0.569	3.1
INDONESIA	80000.	40.51	1.76	0.569	23.0
CANADA	25000.	12.66	1.76	0.569	7.2
TANZANIA	78000.	39.49	1.76	0.569	22.4
TOTAL:	197500	100.00			

SOURCE IMPORTANCE
(LOC 3)

SOURCE	% (LOC) COMP IMP	FE/GE-DETRALL CRITICALITY	TOTAL	NORMALIZED TO 100
DEPT				
FINLAND	4.477	7.76	34.72	11.01
MOROCCO	1.252	7.76	9.71	3.03
BOTSWANNA	0.813	7.76	6.31	2.00
SOUTH AFRICA	0.371	7.76	2.87	0.91
HAIRE	40.670	7.76	315.42	101.00
PHILIPPINES	0.347	7.76	2.69	0.85
AUSTRALIA	2.779	7.76	21.55	6.83
NEW CALEDONIA	1.737	7.76	13.47	4.31
CANADA	2.406	7.76	18.67	5.92
U.S.	1.471	7.76	11.14	3.54

TIN				
AUSTRALIA	0.130	0.00	0.00	0.00
U.S.	11.254	0.00	0.00	0.00
THAILAND	10.611	0.00	0.00	0.00
INDONESIA	10.431	0.00	0.00	0.00
U.S.	0.034	0.00	0.00	0.00
BOLIVIA	17.014	0.00	0.00	0.00
BRAZIL	3.014	0.00	0.00	0.00
PERU	1.503	0.00	0.00	0.00
MALAYSIA	42.433	0.00	0.00	0.00

NICKEL				
FINLAND	0.191	10.00	1.91	0.60
SOUTH AFRICA	0.710	10.00	7.10	2.23
PHILIPPINES	1.997	10.00	19.97	6.33
AUSTRALIA	9.985	10.00	99.85	31.31
CANADA	18.877	10.00	188.77	59.85
U.S.	12.501	10.00	125.01	39.41
GREECE	0.112	10.00	1.12	0.36
NETHERLANDS	0.037	10.00	0.37	0.12
FRG	0.019	10.00	0.19	0.06
YUGOSLAVIA	0.034	10.00	0.34	0.11
USSR	1.905	10.00	19.05	6.04
DOM. REPUB.	3.582	10.00	35.82	11.36
GUATAMALA	0.955	10.00	9.55	3.03
INDONESIA	1.997	10.00	19.97	6.33

FLUOREPHAR ACID				
SOUTH AFRICA	9.649	8.51	82.23	26.09
U.S.	3.760	8.51	32.00	10.14
ITALY	4.597	8.51	39.12	12.40
SPAIN	7.073	8.51	60.19	19.08
EAST AFRICA	1.768	8.51	15.05	4.77
THAILAND	2.265	8.51	19.28	6.11
MEXICO	18.801	8.51	159.98	50.72

PERETHRUM				
SOUTH AFRICA	0.438	4.35	1.91	0.60
AUSTRALIA	0.923	4.35	4.02	1.27
UK	3.171	4.35	13.81	4.38
KENYA	23.063	4.35	100.42	31.64
RWANDA	7.207	4.35	31.33	9.95
TANZANIA	22.487	4.35	97.91	31.04

SOURCE IMPORTANCE
RANKED BY SOURCE
(LOL 3)

#	SOURCE	COMMODITY	VALUE
1	ZAMBIA	COBALT	100.00
2	CANADA	NICKEL	59.85
3	MEXICO	FLUORSPAR ACID	50.72
4	U S	NICKEL	39.63
5	KENYA	PYRETHRUM	31.84
6	AUSTRALIA	NICKEL	31.64
7	TANZANIA	PYRETHRUM	31.04
8	SOUTH AFRICA	FLUORSPAR ACID	24.08
9	SPAIN	FLUORSPAR ACID	18.03
10	ITALY	FLUORSPAR ACID	12.40
11	DOM REPUB	NICKEL	11.34
12	FINLAND	COBALT	11.01
13	U S	FLUORSPAR ACID	10.14
14	RWANDA	PYRETHRUM	9.95
15	AUSTRALIA	COBALT	6.83
16	INDONESIA	NICKEL	4.33
17	PHILIPPINES	NICKEL	4.33
18	THAILAND	FLUORSPAR ACID	4.11
19	U S	COBALT	4.03
20	USSR	NICKEL	4.04
21	CANADA	COBALT	5.91
22	EAST AFRICA	FLUORSPAR ACID	4.77
23	UK	PYRETHRUM	4.35
24	NEW CALEDONIA	COBALT	4.22
25	MOROCCO	COBALT	3.03
26	GUATEMALA	NICKEL	3.03
27	SOUTH AFRICA	NICKEL	2.25
28	BOTSWANA	COBALT	2.00
29	AUSTRALIA	PYRETHRUM	1.27
30	SOUTH AFRICA	COBALT	0.91
31	PHILIPPINES	COBALT	0.85
32	SOUTH AFRICA	PYRETHRUM	0.60
33	FINLAND	NICKEL	0.60
34	GREECE	NICKEL	0.36
35	YUGOSLAVIA	NICKEL	0.30
36	NETHERLANDS	NICKEL	0.12
37	FRG	NICKEL	0.06
38	MALAYSIA	TIN	0.00
39	PRC	TIN	0.00
40	BRAZIL	TIN	0.00
41	BOLIVIA	TIN	0.00
42	UK	TIN	0.00
43	INDONESIA	TIN	0.00
44	THAILAND	TIN	0.00
45	U S	TIN	0.00
46	AUSTRALIA	TIN	0.00

SCENARIO 17

WEIGHTS on REGION by LEVEL of CONFLICT and MEDIA

Level of Conflict & Media 1										
Region	1	2	3	4	5	6	7	8	9	10
ght	10.0	10.0	7.0	5.0	7.0	10.0	2.0	5.0	2.0	6.0
DEF	0.1563	0.1563	0.1094	0.0781	0.1094	0.1563	0.0313	0.0781	0.0313	0.0781

Level of Conflict & Media 2										
Region	1	2	3	4	5	6	7	8	9	10
ght	10.0	10.0	9.0	4.0	7.0	5.0	10.0	8.0	7.0	5.0
ght	9.0									
DEF	0.1190	0.1190	0.1071	0.0476	0.0833	0.0595	0.1190	0.0952	0.0833	0.0595
DEF	0.1071									

Level of Conflict & Media 3										
Region	1	2	3	4	5	6	7			
ght	10.0	10.0	10.0	10.0	6.0	4.0	10.0			
DEF	0.1667	0.1667	0.1667	0.1667	0.1001	0.0667	0.1667			

Level of Conflict & Media 4										
Region	1	2	3	4						
ght	10.0	4.0	2.0	1.0						
DEF	0.5882	0.2353	0.1176	0.0588						

INFLUENCE COEFFICIENTS OVER ALL LEVEL OF CONFLICTS

on the Importance of Controlling EACH region within its own Media

Media 1										
Region	1	2	3	4	5	6	7	8	9	10
DEF	0.0200	0.0200	0.0140	0.0100	0.0140	0.0200	0.0040	0.0100	0.0040	0.0100

Media 2										
Region	1	2	3	4	5	6	7	8	9	10
ght	11									
DEF	0.0152	0.0152	0.0137	0.0041	0.0107	0.0076	0.0152	0.0122	0.0107	0.0076
DEF	0.0137									

Media 3										
Region	1	2	3	4	5	6	7			
DEF	0.0213	0.0213	0.0213	0.0213	0.0123	0.0095	0.0213			

Media 4										
Region	1	2	3	4						
DEF	0.0752	0.0301	0.0150	0.0075						

Importance of controlling ANY Region within its Media as compared to the Importance of controlling ANY Region of any other Media

Media 1										
Region	1	2	3	4	5	6	7	8	9	10
DEF	0.0087	0.0087	0.0041	0.0043	0.0041	0.0087	0.0017	0.0043	0.0017	0.0022

Media 2										
Region	1	2	3	4	5	6	7	8	9	10
ght	11									
DEF	0.0033	0.0033	0.0030	0.0013	0.0023	0.0017	0.0033	0.0026	0.0023	0.0017
DEF	0.0030									

Media 3										
Region	1	2	3	4	5	6	7			
DEF	0.0056	0.0056	0.0056	0.0056	0.0033	0.0022	0.0056			

Media 4										
Region	1	2	3	4						
DEF	0.0045	0.0026	0.0013	0.0007						

FORCE ELEMENT IMPORTANCE
(LOC 3)

RANKING	ELEMENT NUMBER	FORCE ELEMENT NAME	CALCULATED VALUE	NORMALIZED VALUE
1	17	CARRIER BATTLE GROUP	0.189	10.000
2	1	AIR INTERDICTION	0.110	5.845
3	3	ARMY GROUND	0.095	5.227
4	16	ATTACK SUB	0.073	4.292
5	19	SURFACE COMBATANTS	0.060	3.355
6	8	RAPID REFLOW	0.058	3.255
7	12	THEATER NUCLEAR WEAPON	0.054	3.088
8	14	ASW(LAND BASED)	0.048	2.711
9	6	CAS	0.040	2.241
10	21	AIR SUPERIORITY(LAND BASED)	0.039	2.191
11	15	ASW(SEA BASED)	0.032	1.812
12	23	AIR SUPERIORITY(SHIP BASED)	0.030	1.711
13	21	AIR DEFENSE(SHIP BASED)	0.027	1.552
14	10	STRATEGIC BOMBER	0.025	1.407
15	25	SPEC BASED WEAPON(AIR CNTRL)	0.021	1.184
16	13	SPECIAL OPERATIONS	0.019	1.081
17	29	ASAT(SPACE BASED)	0.018	1.015
18	18	MINE WARFARE	0.018	1.015
19	2	AMPHIBIOUS ASSAULT	0.016	0.913
20	28	ASAT(LAND BASED)	0.007	0.391
21	20	AIR DEFENSE(LAND BASED)	0.004	0.224
22	9	SPEC-BASED WEAPON(LAND CNTRL)	0.013	0.731
23	30	SPEC BASED WEAPON(SEA CNTRL)	0.002	0.111
24	27	ARM(SPACE BASED)	0.001	0.051
25	26	ARM(LAND BASED)	0.001	0.051
26	24	INTERCEPTOR AIRCRAFT	0.000	0.001
27	11	SLBM	0.000	0.000
28	7	ICBM	0.000	0.000
29	5	CIVIL DEFENSE	0.000	0.000
30	4	CBW	0.000	0.000

COMMODITY IMPORTANCE
(LOC 3)

COBALT

AIR INTERDICTION	5.44
ARMY GROUND	4.19
CAS	1.62
ICBM	0.00
STRATEGIC BOMBER	1.76
SLBM	0.00
ASW(SEA BASED)	1.27
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
ASAT(LAND BASED)	0.52

	33.99

TIN

AIR INTERDICTION	5.82
ARMY GROUND	1.75
CAS	1.77
STRATEGIC BOMBER	1.74
LAND BASED	3.11
ASW(SEA BASED)	1.11
ATTACK SUBS	5.23
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.92
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
AIR LAND BASED	0.00
	40.47

NICKEL

AIR INTERDICTION	5.83
ARMY GROUND	4.54
CAS	1.60
STRATEGIC BOMBER	1.76
ASW(SEA BASED)	1.71
ATTACK SUBS	5.23
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.92
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
	40.30

FLUORSPAR ACID

AIR INTERDICTION	6.72
AMPHIBIOUS ASSAULT	0.71
ARMY GROUND	3.42
CAS	1.20
ICBM	0.00
STRATEGIC BOMBER	1.76
SLEM	0.00
ASW(LAND BASED)	3.09
ASW(SEA BASED)	1.62
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.22
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	1.16
INTERCEPTOR AIRCRAFT	0.00
AD(LAND BASED)	0.00
	28.00

PYRETHRUM

ARMY GROUND	2.42
CIVIL DEFENSE	0.00
ASW(SEA BASED)	0.14
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.22
	16.91

COMMODITY NORMALIZED IMPORTANCE

TIN	10.00	(40.47)
NICKEL	9.96	(40.30)
FLUORSPAR ACID	9.51	(38.50)
COBALT	8.40	(33.99)
PYRETHRUM	4.18	(16.92)

COBRA	CAS	67.4111
A-10	CAS	44.9311
COBRA	CAS	98.1011
F-4	AIR INTERDICTION	6.7411
	CAS	61.4168
F-16	AIR INTERDICTION	37.4410
	CAS	3.3701
ART. ACFT	CAS	3.0761
RADIO BLAY	AIR INTERDICTION	2.5176
	CAS	123.1903
F-111	AIR INTERDICTION	34.9451
A-6	AIR INTERDICTION	54.7315
F-15	AIR INTERDICTION	49.1601
A-7	AIR INTERDICTION	41.0511
F-14	AIR INTERDICTION	63.4168
F-18	AIR INTERDICTION	6.0637
SH-3	ASW (SEA BASED)	15.1708
SH-2	ASW (SEA BASED)	23.5390
SH-60B	ASW (SEA BASED)	34.6761
S-3	ASW (SEA BASED)	24.0807
ATT. SUBS	ASW (SEA BASED)	14.4434
FRIGATES	ASW (SEA BASED)	8.6493
DESTROYERS	ASW (SEA BASED)	35.2001
M-42	ARMY GROUND	56.5714
M-60	ARMY GROUND	62.8582
M-1	ARMY GROUND	0.0113
M-551	ARMY GROUND	50.2363
M-901	ARMY GROUND	44.0003
M-2/M-3	ARMY GROUND	4.8890
M-113	ARMY GROUND	18.8575
MLRS	ARMY GROUND	25.1413
TOWED ART.	ARMY GROUND	33.5244
SELF-PROP.	ARMY GROUND	16.7422
PERSHING	ARMY GROUND	27.5370
GLCMs	ARMY GROUND	6.9842
INFANTRY	ARMY GROUND	34.2228
MORTERS	ARMY GROUND	1.4667
ROCKET LAUNCH	ARMY GROUND	

NORMALIZED VALUES	
F-111	10.0000
F-16	0.6667
F-4	0.5479
F-18	0.5556
A-10	0.4732
M-1	0.1042
M-60	0.4593
F-15	0.4444
M-901	0.0634
A-7	0.0000
COBRA	0.6488
M-2/M-3	0.5727
F-14	0.3333
A-6	0.0000
M-42	0.8583
S-3	0.8158
MORTERS	0.7789
SELF-PROP.	0.7223
GLCMs	0.2685
TOWED ART.	0.0417
ATT. SUBS	0.9554
SH-60B	0.9163
MLRS	0.5313
PERSHING	0.3611
SH-2	0.2319
FRIGATES	0.1742
DESTROYERS	0.7039
INFANTRY	0.6671
SH-3	0.4926
RADIO BLAY	0.4551
M-113	0.3370
ART. ACFT	0.2737
ROCKET LAUNCH	0.1171
COBRA	0.0117

TIN		
A-10	CAS	47 4008
COBRA	CAS	58 8134
F-4	AIR INTERDICTION	91 5202
	CAS	6 7403
F-16	AIR INTERDICTION	69 4168
	CAS	37 4410
ART. ACFT	CAS	3 3701
RADIO FLAY	AIR INTERDICTION	3 0788
	CAS	2 5276
F-111	AIR INTERDICTION	113 1503
A-6	AIR INTERDICTION	41 5432
F-15	AIR INTERDICTION	54 7210
A-7	AIR INTERDICTION	48 2601
F-14	AIR INTERDICTION	43 1814
F-18	AIR INTERDICTION	76 9689
SH-3	ASW/SEA BASED	5 2014
SH-2	ASW/SEA BASED	13 0036
SH-60B	ASW/SEA BASED	20 1277
S-3	ASW/SEA BASED	34 6761
ATT. SUBS	ASW/SEA BASED	14 4484
FRIGATES	ASW/SEA BASED	14 4484
DESTROYERS	ASW/SEA BASED	8 6680
M-48	ARMY GROUND	3 9112
M-60	ARMY GROUND	6 2808
M-1	ARMY GROUND	34 9211
M-551	ARMY GROUND	0 0648
M-601	ARMY GROUND	6 2858
M-2/M-3	ARMY GROUND	6 2808
M-113	ARMY GROUND	0 6984
MLRS	ARMY GROUND	9 4287
TOWED ART.	ARMY GROUND	4 1905
SELF-PROP.	ARMY GROUND	5 5874
REPERING	ARMY GROUND	14 6669
GLIMS	ARMY GROUND	24 4449
INFANTRY	ARMY GROUND	55 6740
MORTARS	ARMY GROUND	4 8810
ROLES LNCH	ARMY GROUND	0 2095

NORMALIZED VALUES	
F-111	10.0000
F-16	8.5262
F-4	8.5473
F-15	6.2500
F-10	5.4732
COBRA	4.8651
INFANTRY	4.5371
F-15	4.4444
A-7	4.0000
F-14	3.7500
A-6	3.3750
M-1	2.8357
S-3	2.8158
GLIMS	1.9850
SH-60B	1.6425
PERSHING	1.1910
FRIGATES	1.1732
ATT. SUBS	1.1732
SH-2	1.0559
MLRS	0.7676
DESTROYERS	0.7032
M-2/M-3	0.5104
M-201	0.5104
M-60	0.5104
RADIO FLAY	0.4532
SELF-PROP.	0.4537
SH-3	0.4324
MORTARS	0.3970
TOWED ART.	0.3413
M-48	0.3174
ART. ACFT	0.2707
M-113	0.0617
MLRS	0.0120
ROLES LNCH	0.0017

NICHEL		
A-10	CAS	49.4026
COBRA	CAS	22.9311
F-4	AIR INTERDICTION	73.8901
	CAS	5.0511
F-16	AIR INTERDICTION	48.4169
	CAS	37.4490
ART. ACFT	CAS	2.2468
RADIO FLAY	AIR INTERDICTION	3.0738
	CAS	2.5276
F-111	AIR INTERDICTION	113.1508
A-6	AIR INTERDICTION	36.9451
F-15	AIR INTERDICTION	54.7335
A-7	AIR INTERDICTION	48.2601
F-14	AIR INTERDICTION	46.1814
F-18	AIR INTERDICTION	76.9699
SH-6	ASW(SEA BASED)	6.8371
SH-2	ASW(SEA BASED)	17.8381
SH-60B	ASW(SEA BASED)	24.9703
S-3	ASW(SEA BASED)	34.6761
ATT. SUBS	ASW(SEA BASED)	43.3411
FRIGATES	ASW(SEA BASED)	24.0071
DSTROYERS	ASW(SEA BASED)	15.6043
M-48	ARMY GROUND	39.1118
M-60	ARMY GROUND	62.8582
M-1	ARMY GROUND	69.8425
M-501	ARMY GROUND	0.6944
M-901	ARMY GROUND	44.0008
M-2/M-3	ARMY GROUND	50.2813
M-113	ARMY GROUND	4.8190
MLRS	ARMY GROUND	18.8515
TOWED ART.	ARMY GROUND	33.5144
SELF-PROP.	ARMY GROUND	44.6882
HERSHING	ARMY GROUND	16.7622
GLIMS	ARMY GROUND	20.9527
INFANTRY	ARMY GROUND	34.9212
MORTARS	ARMY GROUND	14.6619
ROLES LNCH	ARMY GROUND	0.2095

NORMALIZED VALUES	
F-111	10.0000
F-16	8.5941
F-4	6.4105
F-18	6.2500
M-1	5.6713
A-10	5.4732
M-60	5.1042
F-15	4.4444
M-2/M-3	4.0834
A-7	4.0000
F-14	3.7500
COBRA	3.6438
SELF-PROP.	3.6226
M-901	3.5729
ATT. SUBS	3.5197
M-48	3.1759
A-6	3.0000
INFANTRY	2.8557
S-3	2.8158
TOWED ART.	2.7222
SH-60B	2.1900
FRIGATES	2.1118
GLIMS	1.7014
MLRS	1.5913
SH-2	1.4079
HERSHING	1.3611
DSTROYERS	1.2671
MORTARS	1.1910
SH-6	0.5730
RADIO FLAY	0.4510
M-113	0.3976
ART. ACFT	0.1814
M-501	0.0511
ROLES LNCH	0.0209

FLUORESCAR ACID		
A-10	CAS	84 2531
COBRA	CAS	44 4111
F-4	AIR INTERDICTION	123 1508
	CAS	8 4204
F-16	AIR INTERDICTION	85 5110
	CAS	42 8075
ART. ACFT	CAS	3 3701
RADIO RLY	AIR INTERDICTION	3 0788
	CAS	2 5236
F-111	AIR INTERDICTION	153 2873
A-6	AIR INTERDICTION	48 1814
F-15	AIR INTERDICTION	63 4168
A-7	AIR INTERDICTION	61 5751
F-14	AIR INTERDICTION	51 3126
F-18	AIR INTERDICTION	80 5210
SH-3	ASW(SEA BASED)	6 9302
SH-2	ASW(SEA BASED)	17 3381
SH-60B	ASW(SEA BASED)	33 7117
S-3	ASW(SEA BASED)	43 3452
ATT. SUBS	ASW(SEA BASED)	28 8968
FRIGATES	ASW(SEA BASED)	20 2277
DESTROYERS	ASW(SEA BASED)	12 1347
M-48	ARMY GROUND	11 7335
M-60	ARMY GROUND	18 8575
M-1	ARMY GROUND	20 9527
M-551	ARMY GROUND	0 2095
M-901	ARMY GROUND	50 2866
M-2/M-3	ARMY GROUND	50 2866
M-113	ARMY GROUND	5 5874
MLRS	ARMY GROUND	15 7146
TOWED ART.	ARMY GROUND	20 9527
SELF-PROP.	ARMY GROUND	27 9370
PERSHING	ARMY GROUND	14 6669
GLCMs	ARMY GROUND	24 4449
INFANTRY	ARMY GROUND	55 8740
MORTERS	ARMY GROUND	24 4449
ROLES LNCH	ARMY GROUND	0 2095

NORMALIZED VALUES	
10.0000	
18.5942	F-111
8.5473	F-16
5.5556	F-4
5.4732	F-18
4.4444	A-10
4.0000	F-15
3.6296	A-7
3.3333	INFANTRY
3.2667	F-14
3.2667	M-2/M-3
3.0000	M-901
2.9191	A-6
2.8178	COBRA
2.1900	S-3
1.8772	SH-60B
1.8148	ATT. SUBS
1.5830	SELF-PROP.
1.5000	MORTERS
1.3611	GLCMs
1.3611	TOWED ART.
1.3140	M-1
1.2250	FRIGATES
1.1263	M-60
1.0208	SH-2
0.9528	MLRS
0.7884	PERSHING
0.7672	DESTROYERS
0.4505	M-48
0.3670	SH-3
0.3430	RADIO RLY
0.2140	F-111
0.0136	ART. ACFT
0.0136	ROLES LNCH
0.0136	COBRA

PYRETHRUM

ATT. SUBS	ATK/SEA BASED	14.4414
M-48	ARMY GROUND	27.3783
M-60	ARMY GROUND	44.0008
M-113	ARMY GROUND	4.8870
TOWED ART.	ARMY GROUND	29.3336
SELF-PROP.	ARMY GROUND	39.1118
INFANTRY	ARMY GROUND	69.8425
MORTERS	ARMY GROUND	34.2219

NORMALIZED VALUES

INFANTRY	10.0000
M-60	6.3000
SELF-PROP.	5.6000
MORTERS	4.9000
TOWED ART.	4.2000
M-48	3.9200
ATT. SUBS	2.0687
M-113	0.7000

ALL COMMODITIES

A-10	CAS	2.8146
COBRA	CAS	1.4471
F-4	AIR INTERDICTION	3.9408
	CAS	0.2696
F-16	AIR INTERDICTION	2.9077
	CAS	1.5915
ART. ACFT	CAS	0.1236
RADIO RLY	AIR INTERDICTION	0.1232
	CAS	0.1011
F-111	AIR INTERDICTION	5.2379
A-6	AIR INTERDICTION	1.6163
F-15	AIR INTERDICTION	2.3242
A-7	AIR INTERDICTION	2.0934
F-14	AIR INTERDICTION	1.8473
F-18	AIR INTERDICTION	3.0733
SH-3	ASW(SEA BASED)	0.2514
SH-2	ASW(SEA BASED)	0.6285
SH-60B	ASW(SEA BASED)	1.0461
S-3	ASW(SEA BASED)	1.4737
ATT. SUBS	ASW(SEA BASED)	1.2522
FRIGATES	ASW(SEA BASED)	0.7513
DESTROYERS	ASW(SEA BASED)	0.4508
M-48	ARMY GROUND	1.1734
M-60	ARMY GROUND	1.8857
M-1	ARMY GROUND	1.8857
M-551	ARMY GROUND	0.0111
M-901	ARMY GROUND	1.5086
M-2/M-3	ARMY GROUND	1.5086
M-113	ARMY GROUND	0.2085
MLRS	ARMY GROUND	0.6286
TOWED ART.	ARMY GROUND	1.1314
SELF-PROP.	ARMY GROUND	1.5086
PERISHING	ARMY GROUND	0.6286
GLCMs	ARMY GROUND	0.9778
INFANTRY	ARMY GROUND	2.2350
MORTERS	ARMY GROUND	1.1245
ROLES LNCH	ARMY GROUND	0.0210

NORMALIZED VALUES	
F-111	10.0000
F-16	8.5962
F-4	8.0445
F-18	5.8824
A-10	5.4732
F-15	4.4444
INFANTRY	4.2702
A-7	4.0000
COBRA	3.7204
M-1	3.6030
M-60	3.6030
F-14	3.5294
A-6	3.0882
M-2/M-3	2.8824
M-901	2.8824
SELF-PROP.	2.8824
S-3	2.8158
ATT. SUBS	2.3925
M-48	2.2418
TOWED ART.	2.1618
MORTERS	2.1484
SH-60B	1.9968
GLCMs	1.8682
FRIGATES	1.4355
PERISHING	1.2010
MLRS	1.2010
SH-2	1.2008
DESTROYERS	0.8613
SH-3	0.4803
RADIO RLY	0.4235
M-113	0.4003
ART. ACFT	0.2361
ROLES LNCH	0.0400
M-551	0.0277

CRITICALITY OF SHORTFALL
ALL FEYS
(LOC 3)

COMMODITY	GOAL (UNITS)	STOCK PILE (UNITS)	SHORT FALL (%)	TRANS- LATED	FEY COMMODITY IMPORT.	CRITIC- ALITY	NORMALIZED FEY SHORTFALL CRITICALITY
SALT	80.4	43.8	-46.7	402.5	3.4	3379.9	7.1
IN	41.0	190.6	353.8	0.0	10.0	10.0	0.0
COEL	200.0	32.2	-83.9	437.7	10.0	4358.1	10.0
SODIUM ACID	1400.0	895.0	-36.1	395.5	9.5	3708.3	8.5
SETHRUM	500.0	0.0	-100.0	453.8	4.2	1897.6	4.2

COMPOSITE IMPORTANCE
(LOC 3)

COBALT

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
ISLAND	1350.	7.71	1.72	0.580	4.477
ROCCO	450.	2.57	2.05	0.487	1.251
TSWANNA	250.	1.43	1.74	0.569	0.813
TH AFRICA	150.	0.84	2.31	0.431	0.371
IRE	9000.	51.43	1.74	0.569	29.232
YERIA	3500.	20.00	1.74	0.569	11.311
LIIPPINES	50.	0.29	0.82	1.211	0.047
STRALIA	400.	2.29	0.82	1.216	2.779
N CALEDONIA	250.	1.43	0.82	1.216	1.737
YADA	1100.	6.29	2.61	0.383	2.403
	1000.	5.71	2.31	0.432	2.471

TOTAL: 17500. 100.00

COMPOSITE IMPORTANCE
(LOC 3)

TIN

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
STRALIA	100.	0.15	0.82	1.216	0.180
ILAND	16100.	23.82	2.31	0.432	10.299
ILAND	5900.	8.73	0.82	1.216	10.611
ONONESIA	5300.	8.58	0.82	1.216	10.431
	100.	0.15	1.74	0.569	0.084
IVIA	10300.	15.24	0.90	1.117	17.014
AZIL	2400.	3.55	0.90	1.117	3.964
	3000.	4.44	2.33	0.429	1.905
AYSIA	23900.	35.36	0.82	1.216	42.983

TOTAL: 67600. 100.00

COMPOSITE IMPORTANCE
(LOC 3)

NICKEL

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1000.	0.33	1.72	0.583	0.181
SOUTH AFRICA	5000	1.64	2.31	0.432	0.716
PHILIPPINES	5000	1.64	0.82	1.216	1.447
AUSTRALIA	15000	8.21	0.82	1.216	8.336
CANADA	150000	48.29	2.61	0.383	18.977
USSR	89000	28.91	2.31	0.432	12.511
GREECE	600.	0.19	1.76	0.569	0.111
NETHERLANDS	200	0.07	1.76	0.569	0.047
FR	100.	0.03	1.76	0.569	0.024
YUGOSLAVIA	500.	0.16	1.76	0.569	0.044
USSR	5100	1.64	0.82	1.216	1.447
DEM. REPUB.	10000	4.92	1.38	0.727	2.111
GUATEMALA	4000	1.31	1.38	0.727	0.951
INDONESIA	5000	1.64	0.82	1.216	1.447
TOTAL:	304400	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

FLUOROSULFONIC ACID

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	150	22.36	2.31	0.432	1.617
USSR	70.	8.70	2.31	0.432	3.760
ITALY	65	8.07	1.76	0.569	4.547
FR IN	100.	12.42	1.76	0.569	7.073
EAST AFRICA	25.	3.11	1.76	0.569	1.768
THAILAND	15.	1.86	0.82	1.216	2.265
MEXICO	350	43.48	2.31	0.432	19.801
TOTAL:	805.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

PYRETHRUM

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	2000.	1.01	2.31	0.432	0.433
AUSTRALIA	1500.	0.76	0.82	1.216	0.923
UK	11000.	5.57	1.76	0.569	3.171
KENYA	80000.	40.51	1.76	0.569	23.032
RWANDA	25000.	12.66	1.76	0.569	7.207
TANZANIA	78000.	39.49	1.76	0.569	22.487
TOTAL:	197500.	100.00			

SOURCE IMPORTANCE
(LOC 8)

SOURCE	VALUATION CONF. INF.	FEEDBACK CRITICALITY	TOTAL	NORMALIZED TO 100
POLY				
FINLAND	4.477	7.76	34.71	15.27
MOROCCO	1.252	7.76	9.71	4.27
BOTSWANA	0.813	7.76	6.31	2.78
SOUTH AFRICA	0.371	7.76	2.87	1.27
ZAIRE	28.232	7.76	217.10	100.00
ZAMBIA	11.339	7.76	88.32	39.84
PHILIPPINES	0.347	7.76	2.69	1.19
AUSTRALIA	2.779	7.76	21.55	9.49
NEW CALEDONIA	1.737	7.76	13.47	5.98
CANADA	2.409	7.76	18.67	8.30
U.S.	2.471	7.76	19.13	8.47
AUSTRALIA	0.180	0.00	0.00	0.00
U.S.	10.299	0.00	0.00	0.00
THAILAND	10.611	0.00	0.00	0.00
INDONESIA	10.431	0.00	0.00	0.00
UK	0.034	0.00	0.00	0.00
BOLIVIA	17.014	0.00	0.00	0.00
BRASIL	3.564	0.00	0.00	0.00
FRG	1.901	0.00	0.00	0.00
MALAYSIA	42.981	0.00	0.00	0.00
POLY				
FINLAND	0.181	10.00	1.91	0.84
SOUTH AFRICA	0.710	10.00	7.10	3.10
PHILIPPINES	1.937	10.00	19.97	8.79
AUSTRALIA	9.985	10.00	99.85	41.97
CANADA	18.877	10.00	188.77	83.12
U.S.	12.501	10.00	125.01	55.01
GREECE	0.112	10.00	1.12	0.49
NETHERLANDS	0.037	10.00	0.37	0.16
FRG	0.019	10.00	0.19	0.08
YUGOSLAVIA	0.094	10.00	0.94	0.41
USSR	1.905	10.00	19.05	8.39
DOM. REPUB.	3.582	10.00	35.82	15.77
GUATAMALA	0.955	10.00	9.55	4.21
INDONESIA	1.997	10.00	19.97	8.79
UOBSER. ACID				
SOUTH AFRICA	9.669	8.51	82.28	36.23
U.S.	3.760	8.51	32.00	14.09
ITALY	4.597	8.51	39.12	17.23
SPAIN	7.073	8.51	60.19	26.50
EAST AFRICA	1.768	8.51	15.05	6.63
THAILAND	2.265	8.51	19.28	8.49
MEXICO	18.801	8.51	159.98	70.45
URETHRUM				
SOUTH AFRICA	0.438	4.35	1.91	0.84
AUSTRALIA	0.923	4.35	4.02	1.77
UK	3.171	4.35	13.81	6.08
KENYA	23.063	4.35	100.42	44.22
RWANDA	7.207	4.35	31.38	13.82
TANZANIA	22.487	4.35	97.91	43.11

SOURCE IMPORTANCE
RANKED BY SOURCE
(10000)

#	SOURCE	COMMODITY	VALUE
1	ZAIRE	COBALT	100.00
2	CANADA	NICKEL	93.12
3	MEXICO	FLUORSPAR ACID	70.45
4	U S	NICKEL	55.05
5	KENYA	PYRETHRUM	44.22
6	AUSTRALIA	NICKEL	41.77
7	TANZANIA	PYRETHRUM	43.11
8	ZAMBIA	COBALT	33.88
9	SOUTH AFRICA	FLUORSPAR ACID	36.21
10	SPAIN	FLUORSPAR ACID	26.50
11	ITALY	FLUORSPAR ACID	17.23
12	DOM. REPUB.	NICKEL	15.77
13	FINLAND	COBALT	15.29
14	U S	FLUORSPAR ACID	14.01
15	RWANDA	PYRETHRUM	12.82
16	AUSTRALIA	COBALT	8.47
17	INDONESIA	NICKEL	8.79
18	PHILIPPINES	NICKEL	8.79
19	THAILAND	FLUORSPAR ACID	8.49
20	U S	COBALT	8.44
21	USSR	NICKEL	8.39
22	CANADA	COBALT	8.22
23	EAST AFRICA	FLUORSPAR ACID	6.62
24	UK	PYRETHRUM	6.08
25	NEW CALEDONIA	COBALT	5.93
26	MOROCCO	COBALT	4.27
27	GUATAMALA	NICKEL	4.21
28	SOUTH AFRICA	NICKEL	3.13
29	BOTSWANNA	COBALT	2.78
30	AUSTRALIA	PYRETHRUM	1.77
31	SOUTH AFRICA	COBALT	1.27
32	PHILIPPINES	COBALT	1.19
33	SOUTH AFRICA	PYRETHRUM	0.84
34	FINLAND	NICKEL	0.84
35	GREECE	NICKEL	0.49
36	YUGOSLAVIA	NICKEL	0.41
37	NETHERLANDS	NICKEL	0.16
38	FRG	NICKEL	0.08
39	MALAYSIA	TIN	0.00
40	PRC	TIN	0.00
41	BRAZIL	TIN	0.00
42	BOLIVIA	TIN	0.00
43	UK	TIN	0.00
44	INDONESIA	TIN	0.00
45	THAILAND	TIN	0.00
46	U S	TIN	0.00
47	AUSTRALIA	TIN	0.00

SCENARIO 18

WEIGHTS on REGION by LEVEL of CONFLICT and MEDIA

Level of Conflict 3 Media 1

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	7.0	5.0	7.0	10.0	2.0	5.0	2.0	1.0
I/CDEF	0.1543	0.1543	0.1094	0.0781	0.1094	0.1543	0.0313	0.0781	0.0313	0.0156

Level of Conflict 3 Media 2

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	9.0	4.0	7.0	5.0	10.0	8.0	7.0	5.0
I/CDEF	0.1190	0.1190	0.1071	0.0471	0.0833	0.0555	0.1190	0.0752	0.0613	0.0555
I/CDEF	0.1071									

Level of Conflict 3 Media 3

Region	1	2	3	4	5	6	7
Weight	10.0	10.0	10.0	10.0	6.0	4.0	10.0
I/CDEF	0.1667	0.1667	0.1667	0.1667	0.1000	0.0667	0.1667

Level of Conflict 3 Media 4

Region	1	2	3	4
Weight	10.0	4.0	2.0	1.0
I/CDEF	0.5882	0.2353	0.1176	0.0588

INFLUENCE COEFFICIENTS OVER ALL LEVEL OF CONFLICTS

on the Importance of Controlling EACH region within its own Media

Media 1	Region	1	2	3	4	5	6	7	8	9	10
I/CDEF		0.0200	0.0200	0.0140	0.0100	0.0140	0.0200	0.0040	0.0100	0.0040	0.0100

Media 2	Region	1	2	3	4	5	6	7	8	9	10
I/CDEF		0.0152	0.0152	0.0137	0.0061	0.0107	0.0076	0.0152	0.0121	0.0107	0.0076

Media 3	Region	1	2	3	4	5	6	7
I/CDEF		0.0213	0.0213	0.0213	0.0213	0.0128	0.0085	0.0113

Media 4	Region	1	2	3	4
I/CDEF		0.0752	0.0301	0.0150	0.0075

Media 1	Region	1	2	3	4
I/CDEF		0.0087	0.0087	0.0061	0.0043

Media 2	Region	1	2	3	4	5	6	7	8	9	10
I/CDEF		0.0087	0.0087	0.0061	0.0043	0.0061	0.0087	0.0017	0.0043	0.0017	0.0052

Media 3	Region	1	2	3	4	5	6	7
I/CDEF		0.0056	0.0056	0.0056	0.0056	0.0033	0.0022	0.0056

Media 4	Region	1	2	3	4
I/CDEF		0.0065	0.0026	0.0013	0.0007

Media 1	Region	1	2	3	4	5	6	7	8	9	10
I/CDEF		0.0033	0.0033	0.0030	0.0013	0.0023	0.0017	0.0033	0.0026	0.0023	0.0017

Media 2	Region	1	2	3	4	5	6	7
I/CDEF		0.0056	0.0056	0.0056	0.0056	0.0033	0.0022	0.0056

Media 3	Region	1	2	3	4
I/CDEF		0.0065	0.0026	0.0013	0.0007

Media 4	Region	1	2	3	4
I/CDEF		0.0065	0.0026	0.0013	0.0007

FORCE ELEMENT IMPORTANCE
(LOC 3)

RANKING	ELEMENT NUMBER	FORCE ELEMENT NAME	CALCULATED VALUE	NORMALIZED VALUE
1	17	CARRIER BATTLE GROUP	0.133	10.000
2	1	AIR INTERDICTION	0.110	7.845
3	3	ARMY GROUND	0.095	6.845
4	13	ATTACK SUBS	0.073	5.222
5	19	SURFACE COMBATANTS	0.060	4.291
6	8	RAPID DEPLOY	0.058	4.144
7	12	THEATER NUCLEAR WEAPON	0.054	3.951
8	14	ASW(LAND BASED)	0.043	3.093
9	6	CAS	0.040	2.900
10	21	AIR SUPERIORITY(LAND BASED)	0.038	2.742
11	15	ASW(SEA BASED)	0.032	2.312
12	23	AIR SUPERIORITY(SHIP BASED)	0.030	2.147
13	21	AIR DEFENSE(SHIP BASED)	0.027	1.954
14	10	STRATEGIC BOMBER	0.025	1.765
15	25	SPACE BASED WEAPON(AIR CNTRL)	0.019	1.384
16	13	SPECIAL OPERATIONS	0.015	1.050
17	29	ASAT(SPACE BASED)	0.013	0.935
18	18	MINE WARFARE	0.013	0.924
19	2	AMPHIBIOUS ASSAULT	0.010	0.713
20	28	ASAT(LAND BASED)	0.007	0.514
21	20	AIR DEFENSE(LAND BASED)	0.004	0.264
22	9	SPACE BASED WEAPON(LND CNTRL)	0.003	0.201
23	30	SPACE BASED WEAPON(SEA CNTRL)	0.002	0.118
24	27	ASM(SPACE BASED)	0.000	0.000
25	26	ASM(LAND BASED)	0.000	0.000
26	24	INTERCEPTOR AIRCRAFT	0.000	0.000
27	11	SLBM	0.000	0.000
28	7	ICBM	0.000	0.000
29	5	CIVIL DEFENSE	0.000	0.000
30	4	CBW	0.000	0.000

COMMODITY IMPORTANCE
(LOC 3)

COBALT

AIR INTERDICTION	5.44
ARMY GROUND	4.19
CAS	1.62
ICBM	0.00
STRATEGIC BOMBER	1.76
SLBM	0.00
ASW(SEA BASED)	1.27
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
ASAT(LAND BASED)	0.52

33.92

TIN

AIR INTERDICTION	5.00
ARMY GROUND	1.75
CAS	1.77
STRATEGIC BOMBER	1.73
ASW(LAND BASED)	3.07
ASW(SEA BASED)	1.11
ATTACK SUBS	5.23
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.00
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
AIR/LAND BASED	0.00
	40.47

NICHEL

AIR INTERDICTION	5.00
ARMY GROUND	4.56
CAS	1.00
STRATEGIC BOMBER	1.76
ASW(SEA BASED)	1.71
ATTACK SUBS	5.23
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.31
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
	40.30

FLUORSPAR ACID

AIR INTERDICTION	6.71
AMPHIBIOUS ASSAULT	0.71
ARMY GROUND	3.42
CAS	1.50
ICBM	0.00
STRATEGIC BOMBER	1.76
SLBM	0.00
ASW(LAND BASED)	5.07
ASW(SEA BASED)	1.68
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
	38.50

PYRETHRUM

ARMY GROUND	2.49
CIVIL DEFENSE	0.00
ASW(SEA BASED)	0.14
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.29
	16.92

COMMODITY NORMALIZED IMPORTANCE

TIN	10.00	(40.47)
NICKEL	9.96	(40.30)
FLUORSPAR ACID	9.51	(38.50)
COBALT	8.40	(33.99)
PYRETHRUM	4.18	(16.92)

COEALT		
A-10	CAS	67 4108
COEAL	CAS	44 4111
F-4	AIR INTERDICTION	98 5288
	CAS	6 74 7
F-16	AIR INTERDICTION	63 4168
	CAS	37 4480
AFT ACFT	CAS	3 3701
RADIO FLAY	AIR INTERDICTION	2 0788
	CAS	2 5274
F-111	AIR INTERDICTION	123 1508
A-6	AIR INTERDICTION	36 9481
F-15	AIR INTERDICTION	54 7385
A-7	AIR INTERDICTION	4 2601
F-14	AIR INTERDICTION	41 0501
F-18	AIR INTERDICTION	68 4168
SH-3	ASW(SEA BASED)	6 0888
SH-2	ASW(SEA BASED)	15 1708
SH-60E	ASW(SEA BASED)	22 5288
S-2	ASW(SEA BASED)	34 6761
ATT. SUBS	ASW(SEA BASED)	24 0807
FRIGATES	ASW(SEA BASED)	14 4484
DESTROYERS	ASW(SEA BASED)	6 6680
M-48	ARMY GROUND	35 2006
M-60	ARMY GROUND	54 5114
M-1	ARMY GROUND	62 8982
M-551	ARMY GROUND	0 2085
M-901	ARMY GROUND	53 2866
M-2/M-3	ARMY GROUND	44 0008
M-113	ARMY GROUND	4 8880
MLRS	ARMY GROUND	18 8875
TOWED ART	ARMY GROUND	25 1433
SELF-PROP.	ARMY GROUND	33 5144
PERSHING	ARMY GROUND	16 7622
GLCMs	ARMY GROUND	27 8170
INFANTRY	ARMY GROUND	6 9842
MORTERS	ARMY GROUND	34 2228
ROLES LNCH	ARMY GROUND	1 4667

NORMALIZED VALUES	
F-111	10.0000
F-16	8.0962
F-4	8.5478
F-18	5.5536
A-10	5.4732
M-1	5.1042
M-60	4.5938
F-15	4.4444
M-901	4.0834
A-7	4.0000
COERA	3.6488
M-2/M-3	3.5722
F-14	3.3333
A-6	3.0000
M-48	2.8783
S-2	2.8178
MORTERS	2.7789
SELF-PROP.	2.7272
GLCMs	2.2785
TOWED ART.	2.0417
ATT. SUBS	1.9554
SH-60E	1.9163
MLRS	1.5313
PERSHING	1.3611
SH-2	1.2319
FRIGATES	1.1732
DESTROYERS	0.7030
INFANTRY	0.5671
SH-3	0.4328
RADIO FLAY	0.4074
M-113	0.3870
AFT ACFT	0.2787
ROLES LNCH	0.1101
SH-1	0.0100

WD-A130 260

SIMULATION OF CRITICAL MATERIALS RESOURCE STRATEGIES
VOLUME 2 APPENDIX D. (U) TITAN SYSTEMS INC LA JOLLA CA
D SOMERFELD 13 SEP 83 TITAN-DSI-105800-07-03-5F-2-D

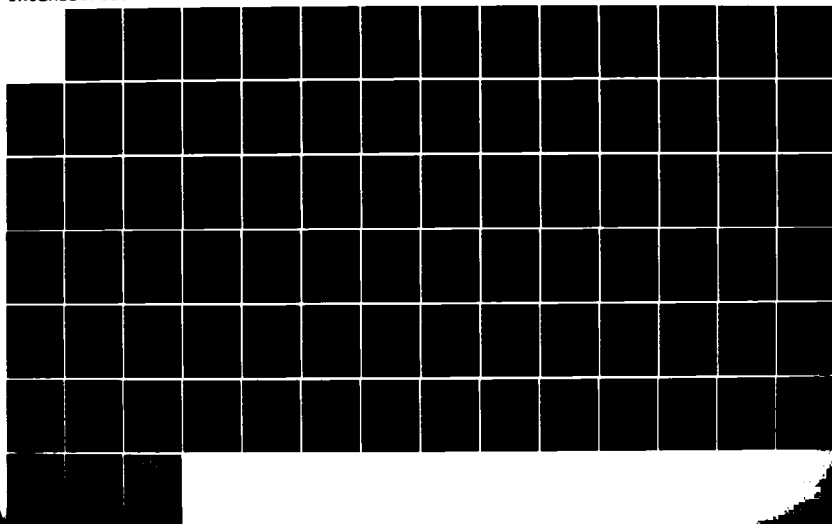
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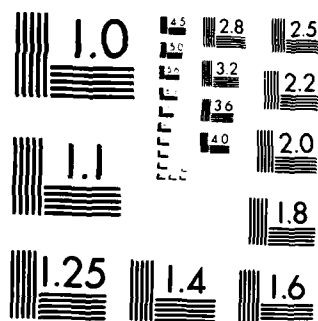
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EMW-C-0906

F/G 15/5

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

TIN		
A-10	CAS	67.4028
COBRA	CAS	59.9136
F-4	AIR INTERDICTION	98.5202
	CAS	6.74
F-16	AIR INTERDICTION	68.4168
	CAS	37.4440
ART. ACFT	CAS	3.3701
RADIO FLAY	AIR INTERDICTION	3.0788
	CAS	2.5276
F-111	AIR INTERDICTION	123.1503
A-6	AIR INTERDICTION	41.5822
F-15	AIR INTERDICTION	54.7807
A-7	AIR INTERDICTION	43.2401
F-14	AIR INTERDICTION	46.1814
F-19	AIR INTERDICTION	76.9699
SH-3	ASW(SEA BASED)	5.2014
SH-2	ASW(SEA BASED)	13.0032
SH-60B	ASW(SEA BASED)	20.1277
S-3	ASW(SEA BASED)	34.6761
ATT. SUBS	ASW(SEA BASED)	14.4484
FRIGATES	ASW(SEA BASED)	14.4484
DESTROYERS	ASW(SEA BASED)	8.6690
M-48	ARMY GROUND	3.9112
M-60	ARMY GROUND	6.2858
M-1	ARMY GROUND	34.9212
M-551	ARMY GROUND	0.0698
M-901	ARMY GROUND	6.2858
M-2/M-3	ARMY GROUND	6.2858
M-113	ARMY GROUND	0.6984
NLRs	ARMY GROUND	9.4287
TOWED ART.	ARMY GROUND	4.1905
SELF-PROP.	ARMY GROUND	5.5874
PERSHING	ARMY GROUND	14.6469
GLCMs	ARMY GROUND	34.4449
INFANTRY	ARMY GROUND	55.8740
MORTERS	ARMY GROUND	4.8890
ROLES LNCH	ARMY GROUND	0.2095

	NORMALIZED VALUES
F-111	10.0000
F-16	8.5962
F-4	8.5473
F-18	6.2500
A-10	5.4732
COBRA	4.8651
INFANTRY	4.5371
F-15	4.4444
A-7	4.0000
F-14	3.7500
A-6	3.3750
M-1	2.8337
S-3	2.8158
GLCMs	1.9850
SH-60B	1.6425
PERSHING	1.1910
FRIGATES	1.1732
ATT. SUBS	1.1732
SH-2	1.0559
NLRs	0.7656
DESTROYERS	0.7039
M-2/M-3	0.5104
M-901	0.5104
M-60	0.5104
RADIO FLAY	0.4552
SELF-PROP.	0.4537
SH-3	0.4224
MORTERS	0.3970
TOWED ART.	0.3403
M-48	0.3176
ART. ACFT	0.2737
M-113	0.0542
ROLES LNCH	0.0170
	0.0000

NICKEL		
A-10	CAS	67.4028
COBRA	CAS	44.9311
F-4	AIR INTERDICTION	73.8902
	CAS	5.0552
F-16	AIR INTERDICTION	68.4168
	CAS	37.4460
ART. ACFT	CAS	2.2468
RADIO RLY	AIR INTERDICTION	3.0788
	CAS	2.5276
F-111	AIR INTERDICTION	123.1503
A-6	AIR INTERDICTION	30.9451
F-15	AIR INTERDICTION	54.7335
A-7	AIR INTERDICTION	49.2601
F-14	AIR INTERDICTION	46.1814
F-18	AIR INTERDICTION	76.9689
SH-3	ASW(SEA BASED)	6.9332
SH-2	ASW(SEA BASED)	17.3381
SH-60B	ASW(SEA BASED)	26.9703
S-3	ASW(SEA BASED)	34.6761
ATT. SUBS	ASW(SEA BASED)	43.3452
FRIGATES	ASW(SEA BASED)	26.0071
DSTROYERS	ASW(SEA BASED)	15.6043
M-48	ARMY GROUND	39.1118
M-60	ARMY GROUND	62.8582
M-1	ARMY GROUND	69.8425
M-551	ARMY GROUND	0.6984
M-901	ARMY GROUND	44.0009
M-2/M-3	ARMY GROUND	50.2866
M-113	ARMY GROUND	4.8990
MLRS	ARMY GROUND	18.8575
TOWED ART.	ARMY GROUND	33.5244
SELF-PROP.	ARMY GROUND	44.6992
PERSHING	ARMY GROUND	16.7622
GLCMS	ARMY GROUND	20.9527
INFANTRY	ARMY GROUND	34.9212
MORTERS	ARMY GROUND	14.6669
ROLES LNCH	ARMY GROUND	0.2095

NORMALIZED VALUES	10.0000
F-111	8.5962
F-16	6.4105
F-4	6.2500
F-18	5.6713
M-1	5.4732
A-10	5.1042
M-60	4.4444
F-15	4.0834
M-2/M-3	4.0000
A-7	3.7500
F-14	3.6488
COBRA	3.6296
SELF-PROP.	3.5729
M-901	3.5197
ATT. SUBS	3.1759
M-48	3.0000
A-6	2.8357
INFANTRY	2.8158
S-3	2.7222
TOWED ART.	2.1900
SH-60B	2.1118
FRIGATES	1.7014
GLCMS	1.5313
MLRS	1.4079
SH-2	1.3611
PERSHING	1.2671
DSTROYERS	1.1910
MORTERS	0.5432
SH-3	0.4504
RADIO RLY	0.3970
M-113	0.1814
ART. ACFT	0.0767
M-551	0.0120
ROLES LNCH	0.0120

FLUORSPAR ACID		
A-10	CAS	84.2536
COBRA	CAS	44.9072
F-4	AIR INTERDICTION	123.1503
	CAS	8.4234
F-16	AIR INTERDICTION	85.5210
	CAS	46.8075
ART. ACFT	CAS	3.3701
RADIO RLY	AIR INTERDICTION	3.0788
	CAS	2.5276
F-111	AIR INTERDICTION	153.9378
A-6	AIR INTERDICTION	46.1814
F-15	AIR INTERDICTION	63.4168
A-7	AIR INTERDICTION	61.5751
F-14	AIR INTERDICTION	51.3126
F-18	AIR INTERDICTION	85.5210
SH-3	ASW(SEA BASED)	6.3312
SH-2	ASW(SEA BASED)	17.3381
SH-60B	ASW(SEA BASED)	33.7129
S-3	ASW(SEA BASED)	43.3452
ATT. SUBS	ASW(SEA BASED)	28.8968
FRIGATES	ASW(SEA BASED)	20.2277
DSTROYERS	ASW(SEA BASED)	12.1367
M-48	ARMY GROUND	11.7335
M-60	ARMY GROUND	18.8575
M-1	ARMY GROUND	20.9527
M-551	ARMY GROUND	0.2095
M-901	ARMY GROUND	50.2866
M-2/M-3	ARMY GROUND	50.2866
M-113	ARMY GROUND	5.5874
MLRS	ARMY GROUND	15.7146
TOWED ART.	ARMY GROUND	20.9527
SELF-PROP.	ARMY GROUND	27.9370
PERSHING	ARMY GROUND	14.6669
GLCMS	ARMY GROUND	24.4449
INFANTRY	ARMY GROUND	55.8740
MORTERS	ARMY GROUND	24.4449
ROLES LNCH	ARMY GROUND	0.2095

NORMALIZED VALUES	
F-111	10.0000
F-16	8.5962
F-4	8.5473
F-18	5.5556
A-10	5.4732
F-15	4.4444
A-7	4.0000
INFANTRY	3.6296
F-14	3.3333
M-2/M-3	3.2667
M-901	3.2667
A-6	3.0000
COBRA	2.9191
S-3	2.8158
SH-60B	2.1900
ATT. SUBS	1.8772
SELF-PROP.	1.8148
MORTERS	1.5880
GLCMS	1.5880
TOWED ART.	1.3611
M-1	1.3611
FRIGATES	1.3140
M-60	1.2250
SH-2	1.1263
MLRS	1.0208
PERSHING	0.9528
DSTROYERS	0.7894
M-48	0.7672
SH-3	0.4905
RADIO RLY	0.3642
M-113	0.3630
ART. ACFT	0.2189
ROLES LNCH	0.0136
M-551	0.0129

PYRETHRUM

ATT. SUBS	ASM/SEA BASED	14.4484
M-48	ARMY GROUND	27.3783
M-60	ARMY GROUND	44.0003
M-113	ARMY GROUND	4.8840
TOWED ART.	ARMY GROUND	29.2033
SELF-PROP.	ARMY GROUND	39.1118
INFANTRY	ARMY GROUND	69.8425
MORTERS	ARMY GROUND	34.2228

NORMALIZED VALUES

INFANTRY	10.0000
M-60	6.3000
SELF-PROP.	5.6000
MORTERS	4.9000
TOWED ART.	4.2000
M-48	3.9200
ATT. SUBS	2.0687
M-113	0.7000

ALL COMMODITIES

A-10	CAS	2 8644
COBRA	CAS	1 9472
F-4	AIR INTERDICTION	3 8408
	CAS	0 2696
F-16	AIR INTERDICTION	2 9077
	CAS	1 5915
ART. ACFT	CAS	0 1236
RADIO RLY	AIR INTERDICTION	0 1232
	CAS	0 1011
F-111	AIR INTERDICTION	5 2347
A-6	AIR INTERDICTION	1 6163
F-15	AIR INTERDICTION	2 3262
A-7	AIR INTERDICTION	2 0926
F-14	AIR INTERDICTION	1 8473
F-18	AIR INTERDICTION	3 0788
SH-3	ASW(SEA BASED)	0 2514
SH-2	ASW(SEA BASED)	0 6285
SH-60B	ASW(SEA BASED)	1 0471
S-3	ASW(SEA BASED)	1 4737
ATT. SUBS	ASW(SEA BASED)	1 2522
FRIGATES	ASW(SEA BASED)	0 7513
DESTROYERS	ASW(SEA BASED)	0 4508
M-48	ARMY GROUND	1 1734
M-60	ARMY GROUND	1 8807
M-1	ARMY GROUND	1 8807
M-551	ARMY GROUND	0 0117
M-901	ARMY GROUND	1 5086
M-2/M-3	ARMY GROUND	1 5013
M-113	ARMY GROUND	0 2095
MLRS	ARMY GROUND	0 6251
TOWED ART.	ARMY GROUND	1 1314
SELF-PROP.	ARMY GROUND	1 5086
PERISHING	ARMY GROUND	0 6086
GLCMs	ARMY GROUND	0 9778
INFANTRY	ARMY GROUND	2 2350
MORTARS	ARMY GROUND	1 1245
ROCKET LNCH	ARMY GROUND	0 0210

NORMALIZED VALUES

F-111	10.0000
F-16	6.5962
F-4	6.0445
F-18	5.8824
A-10	5.4732
F-15	4.4444
INFANTRY	4.2702
A-7	4.0000
COBRA	3.7204
M-1	3.6030
M-60	3.6030
F-14	3.5294
A-6	3.0882
M-2/M-3	2.8824
M-901	2.8824
SELF-PROP.	2.8324
S-3	2.8153
ATT. SUBS	2.3925
M-48	2.2418
TOWED ART.	2.1613
MORTARS	2.1484
SH-60B	1.9043
GLCMs	1.8482
FRIGATES	1.4375
PERISHING	1.2010
MLRS	1.2010
SH-2	1.2008
DESTROYERS	0.8613
SH-3	0.4893
RADIO RLY	0.4295
M-113	0.4003
ART. ACFT	0.2341
ROCKET LNCH	0.0400
M-551	0.0117

CRITICALITY OF SUPPLY

ALL FE'S

(LOC 3)

COMMODITY	GOAL (UNITS)	FILE (UNITS)	SAFETY FALL (%)	TRANS- LATED	FE COMMODITY IMPORT.	CRITIC- ALITY	FE-SHARABLE CRITICALITY
COBALT	85.4	42.8	-48.7	402.5	8.4	3379.9	7.8
TIN	42.0	150.4	353.8	0.0	10.0	0.0	0.0
NICKEL	200.0	32.2	-83.9	437.7	10.0	4359.1	10.0
PERMANGANIC ACID	1400.0	895.0	-36.1	389.9	8.5	3709.3	8.5
PERMETHRIN	500.0	0.0	-100.0	453.8	4.1	1877.4	4.1

COMPOSITE IMPORTANCE

(LOC 3)

COBALT

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	%(1/CI)
FINLAND	1300	6.43	1.72	0.580	3.311
MOROCCO	450	2.14	2.05	0.487	1.043
BOTSWANA	250	1.19	1.76	0.569	0.678
SOUTH AFRICA	150	0.71	2.31	0.432	0.337
ZAIRE	9000	42.83	1.76	0.569	24.402
ZAMBIA	2500	16.17	1.76	0.569	7.433
PHILIPPINES	50	0.24	0.82	1.216	0.244
AUSTRALIA	400	1.90	0.82	1.216	2.313
NEW CALEDONIA	250	1.19	0.82	1.216	1.447
CANADA	1100	5.14	2.31	0.432	2.117
UK	4500	21.43	2.31	0.432	9.266
TOTAL	21000	100.00			

COMPOSITE IMPORTANCE

(LOC 3)

TIN

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	%(1/CI)
AUSTRALIA	100	0.15	0.82	1.216	0.180
UK	16100	23.82	2.31	0.432	10.299
THAILAND	5900	8.73	0.82	1.216	10.611
INDONESIA	5800	8.58	0.82	1.216	10.431
UK	100	0.15	1.76	0.569	0.084
BOLIVIA	10300	15.24	0.90	1.117	17.014
BRAZIL	2400	3.55	0.90	1.117	3.964
PERU	3000	4.44	2.33	0.429	1.905
MYANMAR	23900	35.36	0.82	1.216	42.983
TOTAL	67600	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

MODEL

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1000.	0.82	1.72	0.580	0.141
SOUTH AFRICA	5000.	1.64	2.31	0.432	0.171
PHILIPPINES	5000.	1.64	0.82	1.216	1.887
AUSTRALIA	25000.	8.21	0.82	1.216	8.941
CANADA	150000.	49.28	2.31	0.383	18.870
U.S.	88000.	28.91	2.31	0.432	12.511
GREECE	600.	0.20	1.76	0.569	0.111
NETHERLANDS	200.	0.07	1.76	0.569	0.037
FRG	100.	0.03	1.76	0.569	0.019
ROMANIA	500.	0.16	1.76	0.569	0.049
USSR	5000.	1.64	0.82	1.160	1.801
DOM. REPUBLIC	10000.	4.93	1.38	0.727	3.511
GUATEMALA	4000.	1.31	1.38	0.727	0.950
INDONESIA	5000.	1.64	0.82	1.216	1.847

TOTAL: 304400. 100.00

COMPOSITE IMPORTANCE
(LOC 3)

FLUORSPAR ACID

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	180.	22.36	2.31	0.432	9.669
U.S.	70.	8.70	2.31	0.432	3.760
ITALY	65.	8.07	1.76	0.569	4.587
SPAIN	100.	12.42	1.76	0.569	7.073
EAST AFRICA	25.	3.11	1.76	0.569	1.719
THAILAND	15.	1.86	0.82	1.216	2.265
MEXICO	350.	43.48	2.31	0.432	18.801

TOTAL: 805. 100.00

COMPOSITE IMPORTANCE
(LOC 3)

PYRETHRUM

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	2000.	1.01	2.31	0.432	0.438
AUSTRALIA	1500.	0.76	0.82	1.216	0.923
U.S.	11000.	5.57	1.76	0.569	3.171
KENYA	80000.	40.51	1.76	0.569	23.063
RWANDA	25000.	12.66	1.76	0.569	7.207
TANZANIA	78000.	39.49	1.76	0.569	22.487

TOTAL: 197500. 100.00

SOURCE IMPORTANCE
(LOC 3)

SOURCE	MATERIAL CONF. INFO	RESEARCH/TECHNICAL CRITICALITY	TOTAL	NORMALIZED TO 100
SEALT				
FINLAND	1.131	7.76	20.93	15.25
MOROCCO	1.043	7.76	8.09	4.27
BOTSWANNA	0.678	7.76	5.26	2.78
SOUTH AFRICA	0.309	7.76	2.40	1.27
ZAIRE	24.402	7.76	189.25	100.00
ZAMBIA	9.450	7.76	73.60	38.9
PHILIPPINES	0.289	7.76	2.24	1.19
AUSTRALIA	2.316	7.76	17.96	9.41
NEW CALEDONIA	1.447	7.76	11.22	5.93
CANADA	2.007	7.76	15.56	8.1
U.S.	9.261	7.76	71.87	37.97
TIN				
AUSTRALIA	0.180	0.00	0.00	0.00
U.S.	10.289	0.00	0.00	0.00
THAILAND	10.611	0.00	0.00	0.00
INDONESIA	10.431	0.00	0.00	0.00
UK	0.054	0.00	0.00	0.00
BOLIVIA	17.014	0.00	0.00	0.00
BRAZIL	3.964	0.00	0.00	0.00
FRG	1.502	0.00	0.00	0.00
MALAYSIA	42.983	0.00	0.00	0.00
NICKEL				
FINLAND	0.191	10.00	1.91	1.01
SOUTH AFRICA	0.710	10.00	7.10	3.73
PHILIPPINES	1.997	10.00	19.97	10.55
AUSTRALIA	8.985	10.00	99.85	52.78
CANADA	18.877	10.00	188.77	99.75
U.S.	12.531	10.00	125.01	66.04
GREECE	0.112	10.00	1.12	0.59
NETHERLANDS	0.037	10.00	0.37	0.20
FRG	0.019	10.00	0.19	0.10
YUGOSLAVIA	0.094	10.00	0.94	0.49
USSR	1.905	10.00	19.05	10.06
DOM. REPUB.	3.582	10.00	35.82	18.93
GUATAMALA	0.955	10.00	9.55	5.05
INDONESIA	1.997	10.00	19.97	10.55
FLUORSPAR ACID				
SOUTH AFRICA	9.669	8.51	82.28	43.48
U.S.	3.760	8.51	32.00	16.91
ITALY	4.597	8.51	39.12	20.67
SPAIN	7.073	8.51	60.19	31.80
EAST AFRICA	1.768	8.51	15.05	7.95
THAILAND	2.265	8.51	19.28	10.19
MEXICO	18.801	8.51	159.98	84.54
PYRETHRUM				
SOUTH AFRICA	0.438	4.35	1.91	1.01
AUSTRALIA	0.923	4.35	4.02	2.12
UK	3.171	4.35	13.81	7.30
KENYA	23.063	4.35	100.42	53.06
RWANDA	7.207	4.35	31.38	16.58
TANZANIA	22.487	4.35	97.91	51.74

SOURCE IMPORTANCE
RANKED BY SOURCE
(LOC 3)

SOURCE	COMMODITY	VALUE
ZAIRE	COBALT	100.00
CANADA	NICKEL	98.75
MEXICO	FLUORSPAR ACID	84.50
U S	NICKEL	66.06
KENYA	PYRETHRUM	53.04
AUSTRALIA	NICKEL	52.76
TANZANIA	PYRETHRUM	51.74
SOUTH AFRICA	FLUORSPAR ACID	49.40
ZAMBIA	COBALT	38.87
U S	COBALT	37.00
SPAIN	FLUORSPAR ACID	31.80
ITALY	FLUORSPAR ACID	20.67
DOM. REPUE	NICKEL	18.93
U S	FLUORSPAR ACID	16.91
RWANDA	PYRETHRUM	16.58
FINLAND	COBALT	15.29
INDONESIA	NICKEL	10.55
PHILIPPINES	NICKEL	10.01
THAILAND	FLUORSPAR ACID	10.19
USSR	NICKEL	10.04
AUSTRALIA	COBALT	9.49
CANADA	COBALT	8.22
EAST AFRICA	FLUORSPAR ACID	7.95
UK	PYRETHRUM	7.30
NEW CALEDONIA	COBALT	5.92
GUATAMALA	NICKEL	5.03
MOROCCO	COBALT	4.27
SOUTH AFRICA	NICKEL	3.75
BOTSWANNA	COBALT	2.78
AUSTRALIA	PYRETHRUM	2.12
SOUTH AFRICA	COBALT	1.27
PHILIPPINES	COBALT	1.19
SOUTH AFRICA	PYRETHRUM	1.01
FINLAND	NICKEL	1.01
GREECE	NICKEL	0.59
YUGOSLAVIA	NICKEL	0.49
NETHERLANDS	NICKEL	0.20
FRG	NICKEL	0.10
MALAYSIA	TIN	0.00
PRC	TIN	0.00
BRAZIL	TIN	0.00
BOLIVIA	TIN	0.00
UK	TIN	0.00
INDONESIA	TIN	0.00
THAILAND	TIN	0.00
U S	TIN	0.00
AUSTRALIA	TIN	0.00

SCENARIO 19

WEIGHTS on REGION by LEVEL of CONFLICT and MEDIA

Level of Conflict 3 Media 1

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	7.0	5.0	7.0	2.0	2.0	5.0	2.0	1.0
I/COEF	0.1786	0.1786	0.1250	0.0893	0.1250	0.0357	0.0357	0.0893	0.0357	0.1071

Level of Conflict 3 Media 2

Region	1	2	3	4	5	6	7	8	9	10
Region 11										
Weight	10.0	10.0	9.0	4.0	7.0	5.0	1.0	8.0	7.0	5.0
Weight	9.0									
I/COEF	0.1333	0.1333	0.1200	0.0533	0.0933	0.0667	0.0133	0.1067	0.0933	0.1117
I/COEF	0.1200									

Level of Conflict 3 Media 3

Region	1	2	3	4	5	6	7
Weight	10.0	10.0	10.0	8.0	6.0	4.0	8.0
I/COEF	0.1786	0.1786	0.1786	0.1429	0.1071	0.0714	0.1429

Level of Conflict 3 Media 4

Region	1	2	3	4
Weight	10.0	4.0	2.0	1.0
I/COEF	0.5882	0.2353	0.1176	0.0588

INFLUENCE COEFFICIENTS OVER ALL LEVEL OF CONFLICTS

on the Importance of Controlling EACH region within its own Media

Media 1	Region	1	2	3	4	5	6	7	8	9	10
I/COEF		0.0228	0.0228	0.0160	0.0114	0.0160	0.0048	0.0048	0.0114	0.0048	0.0117

Media 2	Region	1	2	3	4	5	6	7	8	9	10
Media 11											

Region	1	2	3	4	5	6	7	8	9	10
I/COEF	0.0171	0.0171	0.0154	0.0048	0.0119	0.0085	0.0017	0.0138	0.0119	0.0085
I/COEF	0.0154									

Media 3	Region	1	2	3	4	5	6	7
I/COEF		0.0228	0.0228	0.0228	0.0183	0.0137	0.0091	0.0183

Media 4	Region	1	2	3	4
I/COEF		0.0752	0.0301	0.0150	0.0075

Importance of controlling ANY Region within its Media as compared to the Importance of controlling ANY Region of any other Media

Media 1	Region	1	2	3	4	5	6	7	8	9	10
I/COEF		0.0099	0.0099	0.0070	0.0050	0.0070	0.0020	0.0020	0.0050	0.0020	0.0050

Media 2	Region	1	2	3	4	5	6	7	8	9	10
Media 11											

Region	1	2	3	4	5	6	7	8	9	10
I/COEF	0.0037	0.0037	0.0033	0.0015	0.0026	0.0019	0.0004	0.0030	0.0026	0.0019
I/COEF	0.0033									

Media 3	Region	1	2	3	4	5	6	7
I/COEF		0.0060	0.0060	0.0060	0.0048	0.0036	0.0024	0.0048

Media 4	Region	1	2	3	4
I/COEF		0.0065	0.0026	0.0013	0.0007

FORCE ELEMENT IMPORTANCE
(LOC 3)

RANKING	ELEMENT NUMBER	FORCE ELEMENT NAME	CALCULATED VALUE	NORMALIZED VALUE
1	17	CARRIER BATTLE GROUP	0.141	10.000
2	1	AIR INTERDICTION	0.117	8.211
3	3	ARMY GROUND	0.104	7.382
4	16	ATTACK SUBS	0.072	5.120
5	19	SURFACE COMBATANTS	0.060	4.249
6	12	THEATER NUCLEAR WEAPON	0.054	3.812
7	8	RAPID DEPLOY	0.052	3.703
8	6	CAS	0.044	3.132
9	14	ASW(LAND BASED)	0.043	3.080
10	22	AIR SUPERIORITY(LAND BASED)	0.041	2.910
11	15	ASW(SEA BASED)	0.033	2.315
12	23	AIR SUPERIORITY(SHIP BASED)	0.031	2.173
13	21	AIR DEFENSE(SHIP BASED)	0.029	2.065
14	10	STRATEGIC BOMBER	0.025	1.727
15	25	SPACE BASED WEAPON(AIR CNTRL)	0.020	1.416
16	29	ASAT(SPACE BASED)	0.013	0.924
17	18	MINE WARFARE	0.013	0.891
18	2	AMPHIBIOUS ASSAULT	0.011	0.757
19	13	SPECIAL OPERATIONS	0.010	0.723
20	28	ASAT(LAND BASED)	0.007	0.510
21	20	AIR DEFENSE(LAND BASED)	0.004	0.278
22	9	SPACE BASED WEAPON(LAND CNTRL)	0.003	0.212
23	30	SPACE BASED WEAPON(SEA CNTRL)	0.002	0.118
24	27	ABM(SPACE BASED)	0.000	0.000
25	26	ABM(LAND BASED)	0.000	0.000
26	14	INTERCEPTOR AIRCRAFT	0.000	0.000
27	11	SLBM	0.000	0.000
28	7	ICBM	0.000	0.000
29	5	CIVIL DEFENSE	0.000	0.000
30	4	CBW	0.000	0.000

COMMODITY IMPORTANCE
(LOC 3)

COBALT

AIR INTERDICTION	5.71
ARMY GROUND	4.52
CAS	1.75
ICBM	0.00
STRATEGIC BOMBER	1.79
SLBM	0.00
ASW(SEA BASED)	1.27
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ASAT(LAND BASED)	0.51

34.99

TIN

AIR INTERDICTION	5.90
ARMY GROUND	1.92
CAS	1.91
STRATEGIC BOMBER	1.79
ASW(LAND BASED)	3.03
ASW(SEA BASED)	1.11
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ASM(LAND BASED)	0.00
	41.18

NICKEL

AIR INTERDICTION	5.60
ARMY GROUND	4.92
CAS	1.72
STRATEGIC BOMBER	1.79
ASW(SEA BASED)	1.71
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
	41.21

FLUORSPAR ACID

AIR INTERDICTION	7.13
AMPHIBIOUS ASSAULT	0.76
ARMY GROUND	3.69
CAS	2.05
ICBM	0.00
STRATEGIC BOMBER	1.79
SLBM	0.00
ASW(LAND BASED)	3.08
ASW(SEA BASED)	1.60
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
	39.57

PYRETHRUM

ARMY GROUND	2.68
CIVIL DEFENSE	0.00
ASW(SEA BASED)	0.14
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
	17.08

COMMODITY NORMALIZED IMPORTANCE

NICKEL	10.00	(41.21)
TIN	9.99	(41.18)
FLUORSPAR ACID	9.60	(39.57)
COBALT	6.49	(34.99)
PYRETHRUM	4.14	(17.08)

COBALT		
A-10	CAS	72.7835
COBRA	CAS	48.4801
F-4	AIR INTERDICTION	103.5050
	CAS	7.2784
F-16	AIR INTERDICTION	71.8785
	CAS	40.4075
AFT. ACFT	CAS	3.6367
RADIO RLY	AIR INTERDICTION	3.2345
	CAS	2.7275
F-111	AIR INTERDICTION	129.3513
A-6	AIR INTERDICTION	38.8144
F-15	AIR INTERDICTION	57.5028
A-7	AIR INTERDICTION	51.7525
F-14	AIR INTERDICTION	43.1271
F-18	AIR INTERDICTION	71.8785
SH-3	ASW(SEA BASED)	6.0775
SH-2	ASW(SEA BASED)	15.1937
SH-60B	ASW(SEA BASED)	23.6346
S-3	ASW(SEA BASED)	34.7284
ATT. SUBS	ASW(SEA BASED)	24.1169
FRIGATES	ASW(SEA BASED)	14.4701
DSTROYERS	ASW(SEA BASED)	8.6821
M-48	ARMY GROUND	37.9669
M-60	ARMY GROUND	61.0182
M-1	ARMY GROUND	67.7980
M-551	ARMY GROUND	0.2260
M-901	ARMY GROUND	54.2384
M-2/M-3	ARMY GROUND	47.4586
M-113	ARMY GROUND	5.2732
MLRS	ARMY GROUND	20.3394
TOWED ART.	ARMY GROUND	27.1192
SELF-PROP.	ARMY GROUND	36.1589
PERSHING	ARMY GROUND	18.0795
GLCMS	ARMY GROUND	30.1324
INFANTRY	ARMY GROUND	7.5331
MORTERS	ARMY GROUND	36.9131
RCLES LNCH	ARMY GROUND	1.5820

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6216
F-18	5.5556
M-1	5.2402
M-60	4.7162
F-15	4.4444
M-901	4.1921
A-7	4.0000
COBRA	3.7473
M-2/M-3	3.6681
F-14	3.3333
A-6	3.0000
M-48	2.9345
MORTERS	2.8580
SELF-PROP.	2.7948
S-3	2.6842
GLCMS	2.3290
TOWED ART.	2.0961
ATT. SUBS	1.8640
SH-60B	1.8267
MLRS	1.5721
PERSHING	1.3974
SH-2	1.1743
FRIGATES	1.1184
DSTROYERS	0.6710
INFANTRY	0.5822
SH-3	0.4697
RADIO RLY	0.4603
M-113	0.4076
ART. ACFT	0.2811
RCLES LNCH	0.1223
M-551	0.0175

TIN		
A-10	CAS	72.7333
COBRA	CAS	64.6511
F-4	AIR INTERDICTION	103.5050
	CAS	7.2704
F-16	AIR INTERDICTION	71.8785
	CAS	40.4175
ART. ACFT	CAS	3.6367
RADIO RLY	AIR INTERDICTION	3.2345
	CAS	2.7275
F-111	AIR INTERDICTION	129.3913
A-6	AIR INTERDICTION	43.6662
F-15	AIR INTERDICTION	57.5008
A-7	AIR INTERDICTION	51.7525
F-14	AIR INTERDICTION	48.5180
F-18	AIR INTERDICTION	80.8633
SH-3	ASW(SEA BASED)	5.2093
SH-2	ASW(SEA BASED)	10.0231
SH-60B	ASW(SEA BASED)	20.2582
S-3	ASW(SEA BASED)	34.7284
ATT. SUBS	ASW(SEA BASED)	14.4701
FRIGATES	ASW(SEA BASED)	14.4701
DSTROYERS	ASW(SEA BASED)	8.6821
M-48	ARMY GROUND	4.2185
M-60	ARMY GROUND	6.7798
M-1	ARMY GROUND	37.6655
M-551	ARMY GROUND	0.0753
M-901	ARMY GROUND	6.7798
M-2/M-3	ARMY GROUND	6.7798
M-113	ARMY GROUND	0.7533
MLRS	ARMY GROUND	10.1697
TOWED ART.	ARMY GROUND	4.5199
SELF-PROP.	ARMY GROUND	6.0265
PERSHING	ARMY GROUND	15.8195
GLCMS	ARMY GROUND	25.3609
INFANTRY	ARMY GROUND	60.2649
MORTERS	ARMY GROUND	3.2732
ROLES LNCH	ARMY GROUND	0.2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
F-18	6.2500
A-10	5.6216
COBRA	4.9970
INFANTRY	4.6579
F-15	4.4444
A-7	4.0000
F-14	3.7500
A-6	3.3750
M-1	2.9112
S-3	2.6842
GLCMS	2.0378
SH-60B	1.5658
PERSHING	1.2227
FRIGATES	1.1184
ATT. SUBS	1.1184
SH-2	1.0066
MLRS	0.7860
DSTROYERS	0.6710
M-2/M-3	0.5240
M-901	0.5240
M-60	0.5240
SELF-PROP.	0.4658
RADIO RLY	0.4603
MORTERS	0.4076
SH-3	0.4026
TOWED ART.	0.3493
M-48	0.3261
ART. ACFT	0.2811
M-113	0.0587
ROLES LNCH	0.0175
M-551	0.0090

NICHEL		
A-10	CAS	72.7334
COBRA	CAS	43.4371
F-4	AIR INTERDICTION	77.6283
	CAS	5.4530
F-16	AIR INTERDICTION	71.8735
	CAS	40.4073
ART. ACFT	CAS	2.4245
RADIO RLY	AIR INTERDICTION	3.2345
	CAS	2.7275
F-111	AIR INTERDICTION	123.3813
A-6	AIR INTERDICTION	39.8144
F-15	AIR INTERDICTION	57.5026
A-7	AIR INTERDICTION	51.7525
F-14	AIR INTERDICTION	43.5180
F-18	AIR INTERDICTION	80.8633
SH-3	ASW(SEA BASED)	6.9407
SH-2	ASW(SEA BASED)	17.3642
SH-60B	ASW(SEA BASED)	27.0107
S-3	ASW(SEA BASED)	34.7284
ATT. SUBS	ASW(SEA BASED)	43.4104
FRIGATES	ASW(SEA BASED)	26.0463
DESTROYERS	ASW(SEA BASED)	15.6278
M-48	ARMY GROUND	42.1854
M-60	ARMY GROUND	67.7980
M-1	ARMY GROUND	0.75.3311
M-551	ARMY GROUND	0.7533
M-901	ARMY GROUND	47.4586
M-2/M-3	ARMY GROUND	54.2314
M-113	ARMY GROUND	5.2732
MLRE	ARMY GROUND	20.3314
TOWED ART.	ARMY GROUND	36.1589
SELF-PROP.	ARMY GROUND	43.2119
PERSHING	ARMY GROUND	18.0795
GLCMs	ARMY GROUND	22.5993
INFANTRY	ARMY GROUND	37.6455
MORTERS	ARMY GROUND	19.8193
ROLES LNCH	ARMY GROUND	0.2260

	NORMALIZED VALUES
F-111	10.0000
F-16	8.6787
F-4	6.4216
F-18	6.2500
M-1	5.8224
A-10	5.6216
M-60	5.2402
F-15	4.4444
M-2/M-3	4.1921
A-7	4.0000
F-14	3.7500
COBRA	3.7473
SELF-PROP.	3.7263
M-901	3.6681
ATT. SUBS	3.3552
M-48	3.2607
A-6	3.0000
INFANTRY	2.9112
TOWED ART.	2.7948
S-3	2.6842
SH-60B	2.0877
FRIGATES	2.0131
GLCMs	1.7467
MLRS	1.5721
PERSHING	1.3974
SH-2	1.3471
MORTERS	1.2227
DESTROYERS	1.2079
SH-3	0.5368
RADIO RLY	0.4603
M-113	0.4076
ART. ACFT	0.1874
M-551	0.0582
ROLES LNCH	0.0177

FLUORSPAR ACID		
A-10	CAS	90.9170
COBRA	CAS	48.4891
F-4	AIR INTERDICTION	129.3813
	CAS	9.0917
F-16	AIR INTERDICTION	89.8481
	CAS	50.5054
ART. ACFT	CAS	3.6367
RADIO RLAY	AIR INTERDICTION	3.2345
	CAS	2.7275
F-111	AIR INTERDICTION	161.7266
A-6	AIR INTERDICTION	48.5180
F-15	AIR INTERDICTION	71.8785
A-7	AIR INTERDICTION	64.6906
F-14	AIR INTERDICTION	53.9089
F-18	AIR INTERDICTION	89.8481
SH-3	ASW(SEA BASED)	6.9437
SH-2	ASW(SEA BASED)	17.3642
SH-60B	ASW(SEA BASED)	33.7637
S-3	ASW(SEA BASED)	43.4104
ATT. SUBS	ASW(SEA BASED)	28.9403
FRIGATES	ASW(SEA BASED)	20.2582
DSTROYERS	ASW(SEA BASED)	12.1549
M-48	ARMY GROUND	12.6556
M-60	ARMY GROUND	20.3394
M-1	ARMY GROUND	22.5993
M-551	ARMY GROUND	0.2260
M-901	ARMY GROUND	54.2384
M-2/M-3	ARMY GROUND	54.2384
M-113	ARMY GROUND	6.0265
MLRS	ARMY GROUND	16.9495
TOWED ART.	ARMY GROUND	22.5993
SELF-PROP.	ARMY GROUND	30.1324
PERSHING	ARMY GROUND	15.8195
GLCMS	ARMY GROUND	26.3659
INFANTRY	ARMY GROUND	60.2649
MORTERS	ARMY GROUND	26.3659
RCLES LNCH	ARMY GROUND	0.2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6216
F-18	5.5556
F-15	4.4444
A-7	4.0000
INFANTRY	3.7263
M-2/M-3	3.3537
M-901	3.3537
F-14	3.3333
A-6	3.0000
COBRA	2.9982
S-3	2.6842
SH-60B	2.0877
SELF-PROP.	1.8632
ATT. SUBS	1.7895
MORTERS	1.6303
GLCMS	1.6303
TOWED ART.	1.3974
M-1	1.3974
M-60	1.2576
FRIGATES	1.2526
SH-2	1.0737
MLRS	1.0480
PERSHING	0.9782
M-48	0.7825
DSTROYERS	0.7516
SH-3	0.4295
M-113	0.3726
RADIO RLAY	0.3686
ART. ACFT	0.2249
RCLES LNCH	0.0140
M-551	0.0140

PYRETHRUM

ATT. SUBS	ASW (SEA BASED)	14.4701
M-48	ARMY GROUND	29.5213
M-60	ARMY GROUND	47.4586
M-113	ARMY GROUND	5.2732
TOWED ART.	ARMY GROUND	31.6390
SELF-PROP.	ARMY GROUND	42.1854
INFANTRY	ARMY GROUND	75.3311
MORTERS	ARMY GROUND	36.9122

NORMALIZED VALUES

INFANTRY	10.0000
M-60	6.3000
SELF-PROP.	5.6000
MORTERS	4.9000
TOWED ART.	4.2000
M-48	3.9200
ATT. SUBS	1.9209
M-113	0.7000

ALL COMMODITIES

A-10	CAS	3 0912
COBRA	CAS	2 1012
F-4	AIR INTERDICTION	4 1431
	CAS	0 2909
F-16	AIR INTERDICTION	3 0548
	CAS	1 7173
ART. ACFT	CAS	0 1333
RADIO RLAY	AIR INTERDICTION	0 1234
	CAS	0 1091
F-111	AIR INTERDICTION	5 4837
A-6	AIR INTERDICTION	1 6981
F-15	AIR INTERDICTION	2 4439
A-7	AIR INTERDICTION	2 1995
F-14	AIR INTERDICTION	1 9407
F-18	AIR INTERDICTION	3 2345
SH-3	ASW(SEA BASED)	0 2513
SH-2	ASW(SEA BASED)	0 6295
SH-60B	ASW(SEA BASED)	1 0467
S-3	ASW(SEA BASED)	1 4730
ATT. SUBS	ASW(SEA BASED)	1 2541
FRIGATES	ASW(SEA BASED)	0 7524
DSTROYERS	ASW(SEA BASED)	0 4515
M-48	ARMY GROUND	1 2656
M-60	ARMY GROUND	2 0339
M-1	ARMY GROUND	2 0339
M-551	ARMY GROUND	0 0123
M-901	ARMY GROUND	1 6272
M-2/M-3	ARMY GROUND	1 6272
M-113	ARMY GROUND	0 2140
MLRS	ARMY GROUND	0 6780
TOWED ART.	ARMY GROUND	1 2204
SELF-PROP.	ARMY GROUND	1 6272
PERSHING	ARMY GROUND	0 6780
GLCMs	ARMY GROUND	1 0546
INFANTRY	ARMY GROUND	2 4106
MORTERS	ARMY GROUND	1 2128
RCLES LNCH	ARMY GROUND	0 0226

NORMALIZED VALUES	
10.0000	F-111
8.6787	F-16
8.0585	F-4
5.8824	F-18
5.6216	A-10
4.4444	F-15
4.3839	INFANTRY
4.0000	A-7
3.8213	COBRA
3.6982	M-1
3.6989	M-60
3.5294	F-14
3.0832	A-6
2.9592	SELF-PROP.
2.9592	M-2/M-3
2.9592	M-901
2.6842	S-3
2.3016	M-48
2.2807	ATT. SUBS
2.2194	TOWED ART.
2.2057	MORTERS
1.9180	GLCMs
1.9035	SH-60B
1.3684	FRIGATES
1.2330	PERSHING
1.2330	MLRS
1.1447	SH-2
0.8210	DSTROYERS
0.4579	SH-3
0.4337	RADIO RLAY
0.4110	M-113
0.2425	ART. ACFT
0.0411	RCLES LNCH
0.0226	M-551

CRITICALITY OF SHORTFALL
ALL FE'S
(LOC 3)

COMMODITY	GOAL (UNITS)	STOCK FILE (UNITS)	SHORT FALL (%)	TRANS- LATED	FE/ COMMODITY IMPORT.	CRITIC- ALITY	NORMALIZED FE/SHORTFALL CRITICALITY
COBALT	85.4	43.8	-48.7	402.5	8.5	3418.1	7.8
TIN	42.0	190.6	353.8	0.0	10.0	0.0	0.0
NICKEL	200.0	32.2	-83.9	437.7	10.0	4377.1	10.0
FLUORSPAR ACID	1400.0	895.0	-36.1	389.9	9.6	3744.3	8.6
PERETHRUM	500.0	0.0	-100.0	453.8	4.1	1830.7	4.3

COMPOSITE IMPORTANCE
(LOC 3)

COBALT

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1350.	7.71	1.92	0.520	4.012
MALAYSIA	450.	2.57	1.50	0.667	1.717
BOTSWANNA	250.	1.43	0.71	1.404	2.005
SOUTH AFRICA	150.	0.86	1.19	0.841	0.711
IRELAND	12500.	71.43	1.92	0.520	37.143
PHILIPPINES	50.	0.29	0.92	1.087	0.310
AUSTRALIA	400.	2.29	0.92	1.087	0.483
NEW CALEDONIA	250.	1.43	0.92	1.087	1.501
CHINA	1100.	6.29	2.39	0.343	2.173
U.S.	1000.	5.71	2.56	0.391	2.136
TOTAL:	17500.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

TIN

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
AUSTRALIA	100.	0.15	0.92	1.087	0.161
U.S.	16100.	23.82	2.56	0.391	9.319
THAILAND	5900.	8.73	0.92	1.087	9.433
INDONESIA	5800.	8.58	0.92	1.087	9.322
URUGUAY	100.	0.15	1.96	0.510	0.075
BOLIVIA	10300.	15.24	0.98	1.020	15.548
BRAZIL	2400.	3.55	0.86	1.162	4.125
PERU	3000.	4.44	2.47	0.405	1.796
MALAYSIA	23900.	35.36	0.92	1.087	38.414
TOTAL:	67600.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

NICKEL

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1000.	0.33	1.92	0.520	0.171
SOUTH AFRICA	5000.	1.64	1.19	0.841	1.331
PHILIPPINES	5000.	1.64	0.92	1.087	1.785
AUSTRALIA	25000.	8.21	0.92	1.087	8.824
CANADA	150000.	49.28	2.89	0.346	17.054
U.S.	88000.	28.91	2.56	0.391	11.311
GREECE	600.	0.20	1.96	0.510	0.101
NETHERLANDS	200.	0.07	1.96	0.510	0.034
FRG	100.	0.03	1.96	0.510	0.017
YUGOSLAVIA	500.	0.16	1.96	0.510	0.084
USSR	5000.	1.64	0.94	1.061	1.742
DOM. REPUB.	15000.	4.93	1.53	0.656	3.230
GUATEMALA	4000.	1.31	1.53	0.656	0.811
INDONESIA	5000.	1.64	0.92	1.087	1.785
TOTAL:	304400.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

FLUORSPAR ACID

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	180.	22.36	1.19	0.841	18.301
U.S.	70.	8.70	2.56	0.391	3.401
ITALY	65.	8.07	1.96	0.510	4.120
SPAIN	100.	12.42	1.96	0.510	4.338
E. ST. AFRICA	25.	3.11	0.71	1.404	4.108
THAILAND	15.	1.86	0.92	1.087	2.025
MEXICO	350.	43.48	2.56	0.391	17.011
TOTAL:	805.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

PYRETHRUM

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	2000.	1.01	1.19	0.841	0.852
AUSTRALIA	1500.	0.76	0.92	1.087	0.825
UK	11000.	5.57	1.96	0.510	2.842
KENYA	80000.	40.51	0.71	1.404	56.855
RUANDA	25000.	12.66	0.71	1.404	17.767
TANZANIA	78000.	39.49	0.71	1.404	59.433
TOTAL:	197500.	100.00			

SOURCE IMPORTANCE
(LOC 3)

SOURCE	2017011 CONF IMF	FE/SHORTFALL CRITICALITY	TOTAL	NORMALIZED TO 100
C BALT				
FINLAND	4.012	7.81	31.33	10.80
MOROCCO	1.715	7.81	13.40	4.61
BOTSWANNA	2.005	7.81	15.66	5.40
SOUTH AFRICA	0.721	7.81	5.63	1.94
ZAIRE	37.143	7.81	290.09	100.00
PHILIPPINES	0.310	7.81	2.42	0.84
AUSTRALIA	2.483	7.81	19.39	6.69
NEW CALEDONIA	1.552	7.81	12.12	4.13
CANADA	2.175	7.81	16.99	5.96
U S	1.226	7.81	17.43	6.01
TIN				
AUSTRALIA	0.161	0.00	0.00	0.00
U S	9.319	0.00	0.00	0.00
THAILAND	9.483	0.00	0.00	0.00
INDONESIA	9.322	0.00	0.00	0.00
UK	0.075	0.00	0.00	0.00
BOLIVIA	15.548	0.00	0.00	0.00
BRAZIL	4.125	0.00	0.00	0.00
FRG	1.756	0.00	0.00	0.00
MALAYSIA	38.414	0.00	0.00	0.00
NICKEL				
FINLAND	0.171	10.00	1.71	0.59
SOUTH AFRICA	1.381	10.00	13.81	4.76
PHILIPPINES	1.735	10.00	17.35	6.15
AUSTRALIA	8.924	10.00	89.24	30.78
CANADA	17.054	10.00	170.54	58.79
U S	11.311	10.00	113.11	38.99
GREECE	0.101	10.00	1.01	0.35
NETHERLANDS	0.034	10.00	0.34	0.12
FRG	0.017	10.00	0.17	0.06
YUGOSLAVIA	0.054	10.00	0.54	0.29
USSR	1.742	10.00	17.42	6.01
DOM. REPUB.	3.230	10.00	32.30	11.14
GUATAMALA	0.861	10.00	8.61	2.97
INDONESIA	1.785	10.00	17.85	6.15
FLUORSPAR ACID				
SOUTH AFRICA	18.803	8.55	160.85	55.45
U S	3.402	8.55	29.10	10.03
ITALY	4.120	8.55	35.24	12.15
SPAIN	6.338	8.55	54.22	18.69
EAST AFRICA	4.359	8.55	37.29	12.85
THAILAND	2.025	8.55	17.32	5.97
MEXICO	17.011	8.55	145.52	50.16
PYRETHRUM				
SOUTH AFRICA	0.852	4.30	3.66	1.26
AUSTRALIA	0.825	4.30	3.55	1.22
UK	2.842	4.30	12.21	4.21
KENYA	56.855	4.30	244.29	84.21
RWANDA	17.767	4.30	76.34	26.32
TANZANIA	55.433	4.30	238.18	82.11

SOURCE IMPORTANCE
RANKED BY SOURCE
(LOC 3)

SOURCE	COMMODITY	VALUE
ZAIRE	COBALT	100.00
KENYA	PYRETHRUM	84.21
TANZANIA	PYRETHRUM	82.11
CANADA	NICKEL	58.79
SOUTH AFRICA	FLUORSPAR ACID	55.45
MEXICO	FLUORSPAR ACID	50.16
U S	NICKEL	38.99
AUSTRALIA	NICKEL	30.76
RWANDA	PYRETHRUM	26.32
SPAIN	FLUORSPAR ACID	18.69
EAST AFRICA	FLUORSPAR ACID	12.85
ITALY	FLUORSPAR ACID	12.15
DOM. REPUB.	NICKEL	11.14
FINLAND	COBALT	10.83
U S	FLUORSPAR ACID	10.03
AUSTRALIA	COBALT	6.69
INDONESIA	NICKEL	6.15
PHILIPPINES	NICKEL	6.15
U S	COBALT	6.02
USSR	NICKEL	6.01
THAILAND	FLUORSPAR ACID	5.97
CANADA	COBALT	5.86
BOTSWANNA	COBALT	5.40
SOUTH AFRICA	NICKEL	4.76
MOROCCO	COBALT	4.62
UK	PYRETHRUM	4.21
NEW CALEDONIA	COBALT	4.18
GUATAMALA	NICKEL	2.97
SOUTH AFRICA	COBALT	1.94
SOUTH AFRICA	PYRETHRUM	1.26
AUSTRALIA	PYRETHRUM	1.22
PHILIPPINES	COBALT	0.84
FINLAND	NICKEL	0.59
GREECE	NICKEL	0.35
YUGOSLAVIA	NICKEL	0.29
NETHERLANDS	NICKEL	0.12
FRG	NICKEL	0.06
MALAYSIA	TIN	0.00
PRC	TIN	0.00
BRAZIL	TIN	0.00
BOLIVIA	TIN	0.00
UK	TIN	0.00
INDONESIA	TIN	0.00
THAILAND	TIN	0.00
U S	TIN	0.00
AUSTRALIA	TIN	0.00

SCENARIO 20

WEIGHTS on REGION by LEVEL of CONFLICT and MEDIA

Level of Conflict 3 Media 1

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	7.0	5.0	7.0	2.0	2.0	5.0	2.0	3.0
I/COEFF	0.1786	0.1786	0.1250	0.0833	0.1250	0.0357	0.0357	0.0833	0.0357	0.1071

Level of Conflict 3 Media 2

Region	1	2	3	4	5	6	7	8	9	10
Region 11										
Weight	10.0	10.0	9.0	4.0	7.0	5.0	1.0	8.0	7.0	5.0
Weight	9.0									
I/COEFF	0.1333	0.1333	0.1200	0.0533	0.0933	0.0667	0.0133	0.1067	0.0933	0.1667
I/COEFF	0.1200									

Level of Conflict 3 Media 3

Region	1	2	3	4	5	6	7
Weight	10.0	10.0	10.0	8.0	6.0	4.0	8.0
I/COEFF	0.1786	0.1786	0.1786	0.1429	0.1071	0.0714	0.1429

Level of Conflict 3 Media 4

Region	1	2	3	4
Weight	10.0	4.0	2.0	1.0
I/COEFF	0.5833	0.2333	0.1176	0.0588

INFLUENCE COEFFICIENTS OVER ALL LEVEL OF CONFLICTS

on the Importance of Controlling EACH region within its own Media

Media 1	Region	1	2	3	4	5	6	7	8	9	10
I/COEFF		0.0223	0.0223	0.0160	0.0114	0.0160	0.0043	0.0043	0.0114	0.0043	0.0137

Media 2	Region	1	2	3	4	5	6	7	8	9	10
Region 11											
I/COEFF		0.0171	0.0171	0.0154	0.0068	0.0119	0.0095	0.0017	0.0136	0.0119	0.0085
I/COEFF		0.0154									

Media 3	Region	1	2	3	4	5	6	7
I/COEFF		0.0228	0.0228	0.0228	0.0183	0.0137	0.0091	0.0183

Media 4	Region	1	2	3	4
I/COEFF		0.0752	0.0301	0.0150	0.0075

Importance of controlling ANY Region within its Media as compared to the Importance of controlling ANY Region of any other Media

Media 1	Region	1	2	3	4	5	6	7	8	9	10
I/COEFF		0.0099	0.0099	0.0070	0.0050	0.0070	0.0020	0.0020	0.0050	0.0020	0.0060

Media 2	Region	1	2	3	4	5	6	7	8	9	10
Region 11											
I/COEFF		0.0037	0.0037	0.0033	0.0015	0.0026	0.0019	0.0004	0.0030	0.0026	0.0019
I/COEFF		0.0033									

Media 3	Region	1	2	3	4	5	6	7
I/COEFF		0.0060	0.0060	0.0060	0.0048	0.0036	0.0024	0.0048

Media 4	Region	1	2	3	4
I/COEFF		0.0065	0.0026	0.0013	0.0007

FORCE ELEMENT IMPORTANCE
(LOC 3)

RANKING	ELEMENT NUMBER	FORCE ELEMENT NAME	CALCULATED VALUE	NORMALIZED VALUE
1	17	CARRIER BATTLE GROUP	0.141	10.000
2	1	AIR INTERDICTION	0.117	8.263
3	3	ARMY GROUND	0.104	7.382
4	16	ATTACK SUBS	0.072	5.133
5	19	SURFACE COMBATANTS	0.060	4.249
6	12	THEATER NUCLEAR WEAPON	0.054	3.812
7	8	RAPID DEPLOY	0.052	3.706
8	6	CAS	0.044	3.132
9	14	ASW(LAND BASED)	0.043	3.083
10	21	AIR SUPERIORITY(LAND BASED)	0.041	2.910
11	15	ASW(SEA BASED)	0.033	2.315
12	23	AIR SUPERIORITY(SHIP BASED)	0.032	2.278
13	21	AIR DEFENSE(SHIP BASED)	0.029	2.065
14	10	STRATEGIC BOMBER	0.025	1.754
15	25	SPACE BASED WEAPON(AIR CNTRL)	0.020	1.416
16	29	ASAT(SPACE BASED)	0.013	0.924
17	18	MINE WARFARE	0.013	0.891
18	2	AMPHIBIOUS ASSAULT	0.011	0.757
19	13	SPECIAL OPERATIONS	0.010	0.725
20	28	ASAT(LAND BASED)	0.007	0.510
21	20	AIR DEFENSE(LAND BASED)	0.004	0.278
22	9	SPACE BASED WEAPON(LND CNTRL)	0.003	0.212
23	30	SPACE BASED WEAPON(SEA CNTRL)	0.002	0.118
24	27	ABM(SPACE BASED)	0.000	0.000
25	26	ABM(LAND BASED)	0.000	0.000
26	24	INTERCEPTOR AIRCRAFT	0.000	0.000
27	11	SLBM	0.000	0.000
28	7	ICBM	0.000	0.000
29	5	CIVIL DEFENSE	0.000	0.000
30	4	CBW	0.000	0.000

COMMODITY IMPORTANCE
(LOC 3)

COBALT

AIR INTERDICTION	5.71
ARMY GROUND	4.52
CAS	1.75
ICBM	0.00
STRATEGIC BOMBER	1.79
SLBM	0.00
ASW(SEA BASED)	1.27
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ASAT(LAND BASED)	0.51

34.99

FLUORSPAR ACID

AIR INTERDICTION	7.13
AMPHIBIOUS ASSAULT	0.76
ARMY GROUND	3.69
CAS	2.05
ICBM	0.00
STRATEGIC BOMBER	1.79
SLBM	0.00
ASW(LAND BASED)	3.03
ASW(SEA BASED)	1.63
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.23
INTERCEPTOR AIRCRAFT	0.00
ASM(LAND BASED)	0.00
	39.57

PYRETHRUM

ARMY GROUND	2.43
CIVIL DEFENSE	0.00
ASW(SEA BASED)	0.14
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
	17.08

COMMODITY NORMALIZED IMPORTANCE

NICKEL	10.00	(41.21)
TIN	9.99	(41.18)
FLUORSPAR ACID	9.60	(39.57)
COBALT	8.49	(34.99)
PYRETHRUM	4.14	(17.08)

TIN

AIR INTERDICTION	5.90
ARMY GROUND	1.92
CAS	1.91
STRATEGIC BOMBER	1.79
ASW(LAND BASED)	3.08
ASW(SEA BASED)	1.11
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ADM(LAND BASED)	0.00
	41.18

NICKEL

AIR INTERDICTION	5.60
ARMY GROUND	4.91
CAS	1.72
STRATEGIC BOMBER	1.79
ASW(SEA BASED)	1.71
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
	41.21

COBALT		
A-10	CAS	72 7394
COBRA	CAS	48 4891
F-4	AIR INTERDICTION	103 5050
	CAS	7 2794
F-16	AIR INTERDICTION	71 8785
	CAS	40 4075
ART. ACRFT	CAS	3 6367
RADIO RLY	AIR INTERDICTION	3 2345
	CAS	2 7275
F-111	AIR INTERDICTION	129 3813
A-6	AIR INTERDICTION	38 8144
F-15	AIR INTERDICTION	57 5028
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	43 1071
F-10	AIR INTERDICTION	71 8785
SH-3	ASW(SEA BASED)	6 0775
SH-2	ASW(SEA BASED)	15 1937
SH-60B	ASW(SEA BASED)	23 6346
S-3	ASW(SEA BASED)	34 7284
ATT. SUBS	ASW(SEA BASED)	24 1169
FRIGATES	ASW(SEA BASED)	14 4701
DESTROYERS	ASW(SEA BASED)	8 6821
M-48	ARMY GROUND	37 9669
M-60	ARMY GROUND	61 0182
M-1	ARMY GROUND	67 7980
M-551	ARMY GROUND	0 2260
M-901	ARMY GROUND	54 2384
M-2/M-3	ARMY GROUND	47 4586
M-113	ARMY GROUND	5 2732
MLRS	ARMY GROUND	20 3394
TOWED ART.	ARMY GROUND	27 1192
SELF-PROP.	ARMY GROUND	36 1589
PERSHING	ARMY GROUND	18 0795
GLCMS	ARMY GROUND	30 1324
INFANTRY	ARMY GROUND	7 5331
MORTERS	ARMY GROUND	36 9122
ROLES LNCH	ARMY GROUND	1 5820

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6216
F-15	5.5556
M-1	5.2402
M-60	4.7162
F-15	4.4444
M-901	4.1921
A-7	4.0000
COBRA	3.7478
M-2/M-3	3.6681
F-14	3.3333
A-6	3.0000
M-48	2.9345
MORTERS	2.8530
SELF-PROP.	2.7948
S-3	2.6842
GLCMS	2.3290
TOWED ART.	2.0961
ATT. SUBS	1.8640
SH-60B	1.8267
MLRS	1.5721
PERSHING	1.3974
SH-2	1.1743
FRIGATES	1.1184
DESTROYERS	0.6710
INFANTRY	0.5372
SH-3	0.4697
RADIO RLY	0.4608
M-113	0.4076
ART. ACRFT	0.3811
ROLES LNCH	0.1223
M-551	0.0125

TIN		
A-10	CAS	71 7336
COBRA	CAS	64 6511
F-4	AIR INTERDICTION	103 5050
	CAS	7 2734
F-16	AIR INTERDICTION	71 8735
	CAS	40 4075
ART. ACFT	CAS	3 6367
RADIO RLAY	AIR INTERDICTION	3 2345
	CAS	2 7275
F-111	AIR INTERDICTION	129 3813
A-6	AIR INTERDICTION	43 6661
F-15	AIR INTERDICTION	57 5028
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	48 5180
F-18	AIR INTERDICTION	80 8633
SH-3	ASW(SEA BASED)	5 2093
SH-2	ASW(SEA BASED)	13 0231
SH-60B	ASW(SEA BASED)	20 2512
S-3	ASW(SEA BASED)	34 7284
ATT. SUBS	ASW(SEA BASED)	14 4701
FRIGATES	ASW(SEA BASED)	14 4701
DESTROYERS	ASW(SEA BASED)	8 6521
M-48	ARMY GROUND	4 2185
M-60	ARMY GROUND	6 7793
M-1	ARMY GROUND	37 6655
M-551	ARMY GROUND	0 0753
M-901	ARMY GROUND	6 7793
M-2/M-3	ARMY GROUND	6 7793
M-113	ARMY GROUND	0 7533
MLRS	ARMY GROUND	10 1697
TOWED ART.	ARMY GROUND	4 5199
SELF-PROP.	ARMY GROUND	6 0265
PERSHING	ARMY GROUND	15 8195
GLCMS	ARMY GROUND	26 3659
INFANTRY	ARMY GROUND	60 2649
MORTERS	ARMY GROUND	5 2732
ROLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10 0000
F-16	8 6787
F-4	8 5622
F-18	6 2500
A-10	5 6216
COBRA	4 9970
INFANTRY	4 6579
F-15	4 4444
A-7	4 0000
F-14	3 7500
A-6	3 3750
M-1	2 9112
S-3	2 6842
GLCMS	2 0373
SH-60B	1 5653
PERSHING	1 2227
FRIGATES	1 1184
ATT. SUBS	1 1184
SH-2	1 0066
MLRS	0 7840
DESTROYERS	0 6710
M-2/M-3	0 5240
M-901	0 5240
M-60	0 5240
SELF-PROP.	0 4458
RADIO RLAY	0 4603
MORTERS	0 4074
SH-3	0 4024
TOWED ART	0 3493
M-48	0 3261
ART. ACFT	0 2811
M-113	0 0582
ROLES LNCH	0 0173
M-551	0 0053

NICHEL		
A-10	CAS	72 7306
COBRA	CAS	48 4181
F-4	AIR INTERDICTION	77 6288
	CAS	5 4550
F-16	AIR INTERDICTION	71 8785
	CAS	40 4075
AFT. ACFT	CAS	2 4245
RADIO RLY	AIR INTERDICTION	3 2345
	CAS	2 1175
F-111	AIR INTERDICTION	129 3818
A-6	AIR INTERDICTION	39 8144
F-15	AIR INTERDICTION	57 5028
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	48 5180
F-18	AIR INTERDICTION	80 8133
SH-3	ASW (SEA BASED)	6 8407
SH-2	ASW (SEA BASED)	17 3842
SH-60B	ASW (SEA BASED)	27 0104
S-3	ASW (SEA BASED)	34 7284
ATT. SUBS	ASW (SEA BASED)	43 4104
FRIGATES	ASW (SEA BASED)	26 0463
DESTROYERS	ASW (SEA BASED)	15 6275
M-48	ARMY GROUND	42 1854
M-60	ARMY GROUND	67 7980
M-1	ARMY GROUND	75 3311
M-551	ARMY GROUND	0 7533
M-901	ARMY GROUND	47 4586
M-2/M-3	ARMY GROUND	54 2364
M-113	ARMY GROUND	5 2732
MLRS	ARMY GROUND	20 3394
TOWED ART.	ARMY GROUND	30 1589
SELF-PROP.	ARMY GROUND	43 2119
PERSHING	ARMY GROUND	18 0795
GLCMs	ARMY GROUND	22 5993
INFANTRY	ARMY GROUND	37 6655
MORTERS	ARMY GROUND	15 8195
ROLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10 0000
F-16	8 6787
F-4	6 4216
F-18	6 2500
M-1	5 8224
A-10	5 6216
M-60	5 2402
F-15	4 4444
M-2/M-3	4 1921
A-7	4 0000
F-14	3 7500
COBRA	3 7478
SELF-PROP.	3 7263
M-901	3 6681
ATT. SUBS	3 3552
M-48	3 2605
A-6	3 0000
INFANTRY	2 9112
TOWED ART.	2 7948
S-3	2 6842
SH-60B	2 0877
FRIGATES	2 0131
GLCMs	1 7467
MLRS	1 5721
PERSHING	1 3974
SH-2	1 3421
MORTERS	1 2227
DESTROYERS	1 2079
SH-3	0 5363
RADIO RLY	0 4408
M-113	0 4076
ART. ACFT	0 1874
M-551	0 0582
ROLES LNCH	0 0100

FLUOREPAR ACID		
A-10	CAS	94 5170
COBRA	CAS	43 4104
F-4	AIR INTERDICTION	129 3813
	CAS	9 3110
F-16	AIR INTERDICTION	84 8481
	CAS	50 5094
ART. ACFT	CAS	3 6367
RADIO RLY	AIR INTERDICTION	3 2345
	CAS	1 7275
F-111	AIR INTERDICTION	101 7244
A-6	AIR INTERDICTION	43 5150
F-15	AIR INTERDICTION	71 3785
A-7	AIR INTERDICTION	64 6906
F-14	AIR INTERDICTION	53 9010
F-18	AIR INTERDICTION	84 8481
SH-3	ASW(SEA BASED)	6 8457
SH-2	ASW(SEA BASED)	17 3440
SH-60B	ASW(SEA BASED)	33 7487
S-3	ASW(SEA BASED)	43 4104
ATT. SUBS	ASW(SEA BASED)	28 9401
FRIGATES	ASW(SEA BASED)	20 2582
DESTROYERS	ASW(SEA BASED)	12 1544
M-48	ARMY GROUND	12 6556
M-60	ARMY GROUND	20 8394
M-1	ARMY GROUND	12 5993
M-551	ARMY GROUND	0 2260
M-901	ARMY GROUND	54 2384
M-2/M-3	ARMY GROUND	54 2384
M-113	ARMY GROUND	6 0265
MLRS	ARMY GROUND	16 9495
TOWED ART	ARMY GROUND	22 5953
SELF-PROP	ARMY GROUND	30 1324
PERSHING	ARMY GROUND	15 8195
GLOMS	ARMY GROUND	26 3809
INFANTRY	ARMY GROUND	60 2649
MORTERS	ARMY GROUND	26 3659
ROLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES

F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6216
F-18	5.5556
F-15	4.4444
A-7	4.0000
INFANTRY	3.7263
M-2/M-3	3.3537
M-901	3.3537
F-14	3.3333
A-6	3.0000
COBRA	2.9982
S-3	2.6842
SH-60B	2.0877
SELF-PROP.	1.8632
ATT. SUBS	1.7895
MORTERS	1.6303
GLOMS	1.6303
TOWED ART.	1.3974
M-1	1.3974
M-60	1.2576
FRIGATES	1.2526
SH-2	1.0737
MLRS	1.0480
PERSHING	0.9782
M-48	0.7825
DESTROYERS	0.7516
SH-3	0.4295
M-113	0.3726
RADIO RLY	0.3484
ART. ACFT	0.2734
ROLES LNCH	0.0140
M-551	0.0140

PYRETHRUM

ATT SUBS	AFINSEA DABED	14.4701
M-48	ARMY GROUND	29.5298
M-60	ARMY GROUND	47.4586
M-113	ARMY GROUND	5.0732
TOWED ART.	ARMY GROUND	31.6390
SELF-PROP.	ARMY GROUND	42.1854
INFANTRY	ARMY GROUND	75.3311
MORTERS	ARMY GROUND	34.9122

NORMALIZED VALUES

INFANTRY	10.0000
M-60	6.3000
SELF-PROP.	5.6000
MORTERS	4.9000
TOWED ART.	4.2000
M-48	3.9200
ATT SUBS	1.9200
M-113	0.7000

ALL COMMODITIES

A-10	CAS	3 0912
COBRA	CAS	1 1011
F-4	AIR INTERDICTION	4 1402
	CAS	0 2909
F-16	AIR INTERDICTION	3 0543
	CAS	1 7173
ART. ACFT	CAS	0 1333
RADIO RLY	AIR INTERDICTION	0 1294
	CAS	0 1091
F-111	AIR INTERDICTION	5 4787
A-6	AIR INTERDICTION	1 6951
F-15	AIR INTERDICTION	2 4439
A-7	AIR INTERDICTION	2 1995
F-14	AIR INTERDICTION	1 9407
F-18	AIR INTERDICTION	3 2345
SH-3	ASW(SEA BASED)	0 2513
SH-2	ASW(SEA BASED)	0 6295
SH-60B	ASW(SEA BASED)	1 0467
S-3	ASW(SEA BASED)	1 4760
ATT. SUBS	ASW(SEA BASED)	1 2541
FRIGATES	ASW(SEA BASED)	0 7524
DESTROYERS	ASW(SEA BASED)	0 4515
M-48	ARMY GROUND	1 2656
M-60	ARMY GROUND	2 0339
M-1	ARMY GROUND	2 0339
M-551	ARMY GROUND	0 0128
M-901	ARMY GROUND	1 6272
M-2/M-3	ARMY GROUND	1 6272
M-113	ARMY GROUND	0 2260
MLRS	ARMY GROUND	0 6780
TOWED ART.	ARMY GROUND	1 2204
SELF-PROP.	ARMY GROUND	1 6272
PERSHING	ARMY GROUND	0 6780
GLCMS	ARMY GROUND	1 0546
INFANTRY	ARMY GROUND	2 4106
MORTERS	ARMY GROUND	1 2128
POLES LNCH	ARMY GROUND	0 0226

NORMALIZED VALUES

F-111	10.0000
F-16	3.6787
F-4	3.0585
F-18	5.8824
A-10	5.6216
F-15	4.4444
INFANTRY	4.3837
A-7	4.0000
COBRA	3.8213
M-1	3.6989
M-60	3.6989
F-14	3.5294
A-6	3.0882
SELF-PROP.	2.9592
M-2/M-3	2.9592
M-901	2.9592
S-3	2.6842
M-48	2.3016
ATT. SUBS	2.2807
TOWED ART.	2.2194
MORTERS	2.2057
GLCMS	1.9180
SH-60B	1.9035
FRIGATES	1.3631
PERSHING	1.2370
MLRS	1.2330
SH-2	1.1447
DESTROYERS	0.8210
SH-3	0.4579
RADIO RLY	0.4337
M-113	0.4110
ART. ACFT	0.2477
POLES LNCH	0.0411
M-551	0.0128

CRITICALITY OF SHORTFALL

ALL FE'S

(LOC 3)

COMMODITY	DEAL (UNITS)	STOCK PILE (UNITS)	SHORT FALL (%)	TRANSFER- LATED	FE/ COMMODITY IMPORT	CRITICALITY	NORMALIZED FE - SHORTFALL CRITICALITY
COBALT	85.4	43.8	-49.7	402.5	8.5	3418.1	-
TIN	42.0	150.6	353.8	0.0	10.0	0.0	0.0
NICKEL	200.0	32.2	-83.9	477.7	10.0	4377.1	1.0
FLUORSPAR ACID	1400.0	875.0	-36.1	357.9	9.6	3744.3	3.6
PERETHRUM	500.0	0.0	-100.0	403.9	4.1	1630.7	4.3

COMPOSITE IMPORTANCE

(LOC 3)

COBALT

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1350.	7.71	1.92	0.520	4.012
M. ROCCO	450.	2.57	1.50	0.667	1.715
BOTSWANNA	250.	1.43	0.71	1.404	2.005
SOUTH AFRICA	150.	0.86	1.19	0.841	0.701
ZAMBIA	9000.	51.43	1.92	0.520	26.743
ZAMBIA	3500.	20.00	0.71	1.404	23.001
PHILIPPINES	50.	0.29	0.92	1.087	0.310
AUSTRALIA	400.	2.29	0.92	1.087	1.433
NEW CALEDONIA	250.	1.43	0.92	1.087	1.501
CANADA	1100.	6.29	2.89	0.346	2.175
U.S.	1000.	5.71	2.56	0.391	2.236

TOTAL: 17500. 100.00

COMPOSITE IMPORTANCE

(LOC 3)

TIN

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
AUSTRALIA	100.	0.15	0.92	1.087	0.161
U.S.	16100.	23.82	2.56	0.391	9.319
THAILAND	5900.	8.73	0.92	1.087	9.483
INDONESIA	5800.	8.58	0.92	1.087	9.322
UK	100.	0.15	1.96	0.510	0.075
BOLIVIA	10300.	15.24	0.98	1.020	15.541
BRAZIL	2400.	3.55	0.86	1.162	4.125
PRC	3000.	4.44	2.47	0.405	1.796
MALAYSIA	23900.	35.36	0.92	1.087	38.414

TOTAL: 67600. 100.00

COMPOSITE IMPORTANCE
(LOC 3)

NICKEL

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1000	0.33	1.92	0.520	0.171
SOUTH AFRICA	5000	1.64	1.19	0.841	1.331
PHILIPPINES	5000	1.64	0.92	1.087	1.737
AUSTRALIA	25000	8.21	0.92	1.087	8.907
CANADA	150000	48.21	1.90	0.346	17.074
U.S.	88000	28.91	2.56	0.391	11.311
GREECE	600	0.20	1.96	0.510	0.111
NETHERLANDS	200	0.07	1.96	0.510	0.034
F.R.G.	100	0.03	1.96	0.510	0.017
YUGOSLAVIA	500	0.16	1.96	0.510	0.040
USSR	5000	1.64	0.94	1.061	1.742
DEM. REPUB.	15000	4.93	1.53	0.618	3.111
GUATEMALA	4000	1.31	1.53	0.656	0.841
INDONESIA	5000	1.64	0.92	1.087	1.735
TOTAL:	304400	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

FLUORSPAR ACID

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	180	21.36	1.19	0.841	11.801
U.S.	70	8.70	2.56	0.391	3.402
ITALY	65	8.07	1.96	0.510	4.120
FRANCE	100	12.42	1.96	0.510	6.333
EAST AFRICA	25	3.11	0.71	1.404	4.354
THAILAND	15	1.86	0.92	1.087	2.025
MEXICO	350	43.48	2.56	0.391	17.011
TOTAL:	805	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

PYRETHRUM

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	2000	1.01	1.19	0.841	0.852
AUSTRALIA	1500	0.76	0.92	1.087	0.815
U.S.	11000	5.57	1.96	0.510	2.842
KENYA	80000	40.51	0.71	1.404	56.855
RWANDA	25000	12.66	0.71	1.404	17.767
TANZANIA	78000	39.49	0.71	1.404	55.433
TOTAL:	197500	100.00			

SOURCE IMPORTANCE
(LOC 3)

SOURCE	% (LOC 3) COMP IMP	FEVERHOFF ALL CRITICALITY	TOTAL	NORMALISED TO 100
SALT				
FINLAND	4.012	7.81	31.33	12.81
MOROCCO	1.715	7.81	13.40	5.48
BOTSWANNA	2.005	7.81	15.66	6.41
SOUTH AFRICA	0.721	7.81	5.63	2.30
ZAIRE	28.746	7.81	208.86	85.50
ZAMBIA	28.072	7.81	219.22	89.74
PHILIPPINES	0.910	7.81	2.42	0.99
AUSTRALIA	2.433	7.81	19.39	7.94
NEW CALEDONIA	1.552	7.81	12.12	4.96
CANADA	2.175	7.81	16.88	6.90
U.S.	2.236	7.81	17.46	7.15
TIN				
AUSTRALIA	0.141	0.00	0.00	0.00
U.S.	9.318	0.00	0.00	0.00
THAILAND	9.488	0.00	0.00	0.00
INDONESIA	9.320	0.00	0.00	0.00
UK	0.075	0.00	0.00	0.00
BOLIVIA	15.548	0.00	0.00	0.00
BRASIL	4.125	0.00	0.00	0.00
FRG	1.796	0.00	0.00	0.00
MALAYSIA	33.414	0.00	0.00	0.00
NICKEL				
FINLAND	0.171	10.00	1.71	0.70
SOUTH AFRICA	1.381	10.00	13.81	5.47
PHILIPPINES	1.785	10.00	17.85	7.31
AUSTRALIA	8.924	10.00	89.24	36.58
CANADA	17.054	10.00	170.54	69.81
U.S.	11.311	10.00	113.11	45.30
GREECE	0.101	10.00	1.01	0.41
NETHERLANDS	0.034	10.00	0.34	0.14
FRG	0.017	10.00	0.17	0.07
YUGOSLAVIA	0.084	10.00	0.84	0.34
USSR	1.742	10.00	17.42	7.13
DOM. REPUB.	3.230	10.00	32.30	13.22
GUATAMALA	0.861	10.00	8.61	3.53
INDONESIA	1.785	10.00	17.85	7.31
F. JORSPAR ACID				
SOUTH AFRICA	18.803	8.55	160.85	65.84
U.S.	3.402	8.55	29.10	11.91
ITALY	4.120	8.55	35.24	14.43
SPAIN	6.338	8.55	54.22	22.19
EAST AFRICA	4.359	8.55	37.29	15.26
THAILAND	2.025	8.55	17.32	7.09
MEXICO	17.011	8.55	145.52	59.57
PYRETHRUM				
SOUTH AFRICA	0.852	4.30	3.66	1.50
AUSTRALIA	0.825	4.30	3.55	1.45
UK	2.842	4.30	12.21	5.00
KENYA	56.855	4.30	244.29	100.00
RWANDA	17.767	4.30	76.34	31.25
TANZANIA	55.433	4.30	238.18	97.50

SOURCE IMPORTANCE
RANKED BY SOURCE
(LOC 2)

#	SOURCE	COMMODITY	VALUE
1	KENYA	PYRETHRUM	100.00
2	TANZANIA	PYRETHRUM	97.50
3	ZAMBIA	COBALT	85.74
4	ZAIRE	COBALT	85.50
5	CANADA	NICKEL	69.81
6	SOUTH AFRICA	FLUORSPAR ACID	65.94
7	MEXICO	FLUORSPAR ACID	59.57
8	U S	NICKEL	43.30
9	AUSTRALIA	NICKEL	36.53
10	RWANDA	PYRETHRUM	31.25
11	SPAIN	FLUORSPAR ACID	22.19
12	EAST AFRICA	FLUORSPAR ACID	15.26
13	ITALY	FLUORSPAR ACID	14.43
14	DOM. REPUB	NICKEL	13.22
15	FINLAND	COBALT	12.82
16	U S	FLUORSPAR ACID	11.91
17	AUSTRALIA	COBALT	7.94
18	INDONESIA	NICKEL	7.31
19	PHILIPPINES	NICKEL	7.31
20	U S	COBALT	7.15
21	USSR	NICKEL	7.13
22	THAILAND	FLUORSPAR ACID	7.09
23	CANADA	COBALT	6.95
24	BOTSWANNA	COBALT	6.41
25	SOUTH AFRICA	NICKEL	5.65
26	MOROCCO	COBALT	5.42
27	UK	PYRETHRUM	5.00
28	NEW CALEDONIA	COBALT	4.96
29	GUATAMALA	NICKEL	3.53
30	SOUTH AFRICA	COBALT	2.30
31	SOUTH AFRICA	PYRETHRUM	1.50
32	AUSTRALIA	PYRETHRUM	1.45
33	PHILIPPINES	COBALT	0.99
34	FINLAND	NICKEL	0.70
35	GREECE	NICKEL	0.41
36	YUGOSLAVIA	NICKEL	0.34
37	NETHERLANDS	NICKEL	0.14
38	FRG	NICKEL	0.07
39	MALAYSIA	TIN	0.00
40	PRC	TIN	0.00
41	BRAZIL	TIN	0.00
42	BOLIVIA	TIN	0.00
43	UK	TIN	0.00
44	INDONESIA	TIN	0.00
45	THAILAND	TIN	0.00
46	U S	TIN	0.00
47	AUSTRALIA	TIN	0.00

SCENARIO 21

WEIGHTS on REGION by LEVEL of CONFLICT and MEDIA

Level of Conflict 3 Media 1										
Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	7.0	5.0	7.0	2.0	2.0	5.0	2.0	6.0
I/COEF	0.1786	0.1786	0.1250	0.0833	0.1250	0.0357	0.0357	0.0893	0.0357	0.1071

Level of Conflict 3 Media 2										
Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	9.0	4.0	7.0	5.0	1.0	8.0	7.0	5.0
Weight	9.0									
I/COEF	0.1333	0.1333	0.1200	0.0533	0.0933	0.0667	0.0133	0.1067	0.0933	0.0667
I/COEF	0.1200									

Level of Conflict 3 Media 3							
Region	1	2	3	4	5	6	7
Weight	10.0	10.0	10.0	8.0	6.0	4.0	8.0
I/COEF	0.1786	0.1786	0.1786	0.1429	0.1071	0.0714	0.1429

Level of Conflict 3 Media 4				
Region	1	2	3	4
Weight	10.0	4.0	2.0	1.0
I/COEF	0.5882	0.2353	0.1176	0.0588

INFLUENCE COEFFICIENTS OVER ALL LEVEL OF CONFLICTS on the Importance of Controlling EACH region within its own Media

Media 1										
Region	1	2	3	4	5	6	7	8	9	10
I/COEF	0.0228	0.0228	0.0160	0.0114	0.0160	0.0046	0.0046	0.0114	0.0046	0.0114

Media 2										
Region	1	2	3	4	5	6	7	8	9	10
I/COEF	0.0171	0.0171	0.0154	0.0068	0.0119	0.0085	0.0017	0.0136	0.0119	0.0085

Media 3										
I/COEF	0.0171	0.0171	0.0154	0.0068	0.0119	0.0025	0.0017	0.0136	0.0119	0.0085
I/COEF	0.0154									
M/112	3									

Media 4				
Region	1	2	3	4
I/COEF	0.0752	0.0301	0.0150	0.0075

Media 4				
Region	1	2	3	4
I/COEF	0.0752	0.0301	0.0150	0.0075

Importance of controlling ANY Region
within its Media as compared to the Importance
of controlling ANY Region of any other Media

Media 1										
Region	1	2	3	4	5	6	7	8	9	10
I/COEF	0.0099	0.0099	0.0070	0.0050	0.0070	0.0020	0.0020	0.0050	0.0020	0.0060

Media 2										
Region	1	2	3	4	5	6	7	8	9	10
I/COEF	0.0037	0.0037	0.0033	0.0015	0.0026	0.0019	0.0004	0.0030	0.0026	0.0019

Media 3										
I/COEF	0.0037	0.0037	0.0033	0.0015	0.0026	0.0019	0.0004	0.0030	0.0026	0.0019
I/COEF	0.0033									

Media 4				
Region	1	2	3	4
I/COEF	0.0065	0.0026	0.0013	0.0007

Media 4				
Region	1	2	3	4
I/COEF	0.0065	0.0026	0.0013	0.0007

FORCE ELEMENT IMPORTANCE
(LOC 3)

RANKING	ELEMENT NUMBER	FORCE ELEMENT NAME	CALCULATED VALUE	NORMALIZED VALUE
1	17	CARRIER BATTLE GROUP	0.141	10.000
2	1	AIR INTERDICTION	0.117	8.211
3	3	ARMY GROUND	0.104	7.381
4	16	ATTACK SUBS	0.072	5.130
5	19	SURFACE COMBATANTS	0.060	4.249
6	12	THEATER NUCLEAR WEAPON	0.054	3.811
7	8	RAPID DEPLOY	0.052	3.706
8	6	CAS	0.044	3.131
9	14	ASW(LAND BASED)	0.043	3.083
10	22	AIR SUPERIORITY(LAND BASED)	0.041	2.910
11	15	ASW(SEA BASED)	0.033	2.315
12	23	AIR SUPERIORITY(SHIP BASED)	0.032	2.211
13	21	AIR DEFENSE(SHIP BASED)	0.029	2.045
14	10	STRATEGIC BOMBER	0.025	1.734
15	25	SPACE BASED WEAPON(AIR CNTRL)	0.020	1.416
16	29	ASAT(SPACE BASED)	0.013	0.914
17	18	MINE WARFARE	0.013	0.891
18	2	AMPHIBIOUS ASSAULT	0.011	0.757
19	13	SPECIAL OPERATIONS	0.010	0.725
20	28	ASAT(LAND BASED)	0.007	0.510
21	20	AIR DEFENSE(LAND BASED)	0.004	0.278
22	9	SPACE-BASED WEAPON(LND CNTRL)	0.003	0.210
23	30	SPACE BASED WEAPON(SEA CNTRL)	0.002	0.118
24	27	ABM(SPACE BASED)	0.000	0.000
25	26	ABM(LAND BASED)	0.000	0.000
26	24	INTERCEPTOR AIRCRAFT	0.000	0.000
27	11	SLEM	0.000	0.000
28	7	ICBM	0.000	0.000
29	5	CIVIL DEFENSE	0.000	0.000
30	4	CEW	0.000	0.000

COMMUNITY IMPORTANCE

COMBATTANT IMPORTANCE
(LOC 3)

COSALT

AIR INTERDICTION	5.71
ARMY GROUND	4.52
CAS	1.75
ICBM	0.00
STRATEGIC BOMBER	1.79
SLEB	0.00
ASW(SEA BASED)	1.27
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ASAT(LAND BASED)	0.00

	34.99

TIN

AIR INTERDICTION	5.90
ARMY GROUND	1.92
CAS	1.91
STRATEGIC BOMBER	1.75
ASW(LAND BASED)	3.08
ASW(SEA BASED)	1.11
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ASW(LAND BASED)	0.00

	41.18

NICHEL

AIR INTERDICTION	5.60
ARMY GROUND	4.92
CAS	1.72
STRATEGIC BOMBER	1.79
ASW(SEA BASED)	1.71
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00

	41.21

FLUORSPAR ACID

AIR INTERDICTION	7.13
AMPHIBIOUS ASSAULT	0.74
ARMY GROUND	3.62
CAS	1.05
ICBM	0.00
STRATEGIC BOMBER	1.75
SLBM	0.00
ASW(LAND BASED)	3.00
ASW(SEA BASED)	1.00
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.29
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
	39.57

PYRETHRUM

ARMY GROUND	2.48
CIVIL DEFENSE	0.00
ASW(SEA BASED)	0.14
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
	17.08

COMMODITY NORMALIZED IMPORTANCE

NICKEL	10.00	(41.21)
TIN	9.99	(41.18)
FLUORSPAR ACID	9.60	(39.57)
COBALT	8.49	(34.99)
PYRETHRUM	4.14	(17.08)

COBALT		
A-10	CAS	72.7036
COBRA	CAS	48.4811
F-4	AIR INTERDICTION	103.5050
	CAS	7.2714
F-16	AIR INTERDICTION	71.8735
	CAS	40.4075
ART. ACFT	CAS	3.6367
RADIO RLY	AIR INTERDICTION	3.2345
	CAS	2.7275
F-111	AIR INTERDICTION	129.3813
A-6	AIR INTERDICTION	38.8144
F-15	AIR INTERDICTION	57.5028
A-7	AIR INTERDICTION	51.7525
F-14	AIR INTERDICTION	43.1271
F-18	AIR INTERDICTION	71.8735
SH-3	ASW(SEA BASED)	6.0775
SH-2	ASW(SEA BASED)	15.1937
SH-60B	ASW(SEA BASED)	23.6344
S-3	ASW(SEA BASED)	34.7264
ATT. SUBS	ASW(SEA BASED)	24.1169
FRIGATES	ASW(SEA BASED)	14.4701
DESTROYERS	ASW(SEA BASED)	8.6811
M-48	ARMY GROUND	37.9669
M-60	ARMY GROUND	61.0132
M-1	ARMY GROUND	67.7990
M-551	ARMY GROUND	0.2260
M-901	ARMY GROUND	54.2384
M-2/M-3	ARMY GROUND	47.4586
M-113	ARMY GROUND	5.2732
MLRS	ARMY GROUND	20.3394
TOWED ART.	ARMY GROUND	27.1192
SELF-PROP.	ARMY GROUND	36.1589
PERSHING	ARMY GROUND	18.0795
GLCMs	ARMY GROUND	30.1324
INFANTRY	ARMY GROUND	7.5331
MORTERS	ARMY GROUND	36.9122
ROLES LNCH	ARMY GROUND	1.5820

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6217
F-18	5.5556
M-1	5.2402
M-60	4.7162
F-15	4.4444
M-901	4.1921
A-7	4.0000
COBRA	3.7473
M-2/M-3	3.6681
F-14	3.3333
A-6	3.0000
M-48	2.9345
MORTERS	2.8530
SELF-PROP.	2.7948
S-3	2.6842
GLCMs	2.3290
TOWED ART.	2.0961
ATT. SUBS	1.8640
SH-60B	1.8267
MLRS	1.5721
PERSHING	1.3974
SH-2	1.1743
FRIGATES	1.1184
DESTROYERS	0.6710
INFANTRY	0.5822
SH-3	0.4697
RADIO RLY	0.4608
M-113	0.4076
ART. ACFT	0.2811
ROLES LNCH	0.1223
M-551	0.0173

TIN		
A-10	CAS	72 7324
COBRA	CAS	64 6521
F-4	AIR INTERDICTION	103 5050
	CAS	7 2734
F-16	AIR INTERDICTION	71 8785
	CAS	40 4075
ART. ACFT	CAS	3 6317
RADIO RLY	AIR INTERDICTION	3 2343
	CAS	2 7275
F-111	AIR INTERDICTION	129 3913
A-6	AIR INTERDICTION	43 6662
F-15	AIR INTERDICTION	57 5028
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	43 5180
F-18	AIR INTERDICTION	80 8633
SH-3	ASW(SEA BASED)	5 1043
SH-2	ASW(SEA BASED)	13 0231
SH-60B	ASW(SEA BASED)	20 2582
S-3	ASW(SEA BASED)	34 7284
ATT. SUBS	ASW(SEA BASED)	14 4701
FRIGATES	ASW(SEA BASED)	14 4701
DSTROYERS	ASW(SEA BASED)	8 6821
M-48	ARMY GROUND	4 2185
M-60	ARMY GROUND	6 7798
M-1	ARMY GROUND	37 6655
M-551	ARMY GROUND	0 0733
M-901	ARMY GROUND	6 7798
M-2/M-3	ARMY GROUND	6 7798
M-113	ARMY GROUND	0 7533
MLRS	ARMY GROUND	10 1697
TOWED ART.	ARMY GROUND	4 5199
SELF-PROP.	ARMY GROUND	6 0265
PERSHING	ARMY GROUND	15 8195
GLCMS	ARMY GROUND	26 3659
INFANTRY	ARMY GROUND	60 2649
MORTERS	ARMY GROUND	5 2712
RCLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
F-18	6.2500
A-10	5.6216
COBRA	4.9970
INFANTRY	4.6579
F-15	4.4444
A-7	4.0000
F-14	3.7500
A-6	3.3750
M-1	2.9112
S-3	2.6842
GLCMS	2.0378
SH-60B	1.5658
PERSHING	1.2227
FRIGATES	1.1184
ATT. SUBS	1.1184
SH-2	1.0066
MLRS	0.7860
DSTROYERS	0.6710
M-2/M-3	0.5240
M-901	0.5240
M-60	0.5240
SELF-PROP.	0.4658
RADIO RLY	0.4608
MORTERS	0.4076
SH-3	0.4026
TOWED ART.	0.3493
M-48	0.3261
ART. ACFT	0.2811
M-113	0.0582
RCLES LNCH	0.0175
M-551	0.0053

NICHEL		
A-10	CAS	72.7334
COBRA	CAS	49.4871
F-4	AIR INTERDICTION	77.6288
	CAS	5.4550
F-16	AIR INTERDICTION	71.8755
	CAS	40.4075
ART. ACFT	CAS	2.4245
RADIO RLY	AIR INTERDICTION	3.2345
	CAS	2.7275
F-111	AIR INTERDICTION	129.3913
A-6	AIR INTERDICTION	38.8144
F-15	AIR INTERDICTION	57.5023
A-7	AIR INTERDICTION	51.7525
F-14	AIR INTERDICTION	48.5180
F-18	AIR INTERDICTION	80.8433
SH-3	ASW(SEA BASED)	6.9457
SH-2	ASW(SEA BASED)	17.3642
SH-60B	ASW(SEA BASED)	27.0109
S-3	ASW(SEA BASED)	34.7284
ATT. SUBS	ASW(SEA BASED)	43.4104
FRIGATES	ASW(SEA BASED)	26.0463
DESTROYERS	ASW(SEA BASED)	15.6278
M-48	ARMY GROUND	42.1854
M-60	ARMY GROUND	67.7980
M-1	ARMY GROUND	75.3311
M-551	ARMY GROUND	0.7533
M-901	ARMY GROUND	47.4586
M-2/M-3	ARMY GROUND	54.2364
M-113	ARMY GROUND	5.2732
MLRS	ARMY GROUND	20.3394
TOWED ART.	ARMY GROUND	36.1589
SELF-PROP.	ARMY GROUND	48.2119
PERSHING	ARMY GROUND	18.0795
GLCMs	ARMY GROUND	22.5993
INFANTRY	ARMY GROUND	37.6455
MORTERS	ARMY GROUND	15.8195
ROLES LNCH	ARMY GROUND	0.2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	6.4216
F-18	6.2500
M-1	5.8224
A-10	5.6216
M-60	5.2402
F-15	4.4444
M-2/M-3	4.1921
A-7	4.0000
F-14	3.7500
COBRA	3.7478
SELF-PROP.	3.7263
M-901	3.6681
ATT. SUBS	3.3552
M-48	3.2605
A-6	3.0000
INFANTRY	2.9112
TOWED ART.	2.7948
S-3	2.6842
SH-60B	2.0877
FRIGATES	2.0131
GLCMs	1.7467
MLRS	1.5721
PERSHING	1.3974
SH-2	1.3421
MORTERS	1.2227
DESTROYERS	1.2079
SH-3	0.5368
RADIO RLY	0.4603
M-113	0.4076
ART. ACFT	0.1874
M-551	0.0532
ROLES LNCH	0.0175

FLUORSPAR ACID		
A-10	CAS	90 9170
COBRA	CAS	48 4881
F-4	AIR INTERDICTION	129 3813
	CAS	9 0917
F-16	AIR INTERDICTION	99 8481
	CAS	58 5084
ART. ACFT	CAS	3 6867
RADIO FLAY	AIR INTERDICTION	3 2343
	CAS	2 7275
F-111	AIR INTERDICTION	161 7266
A-6	AIR INTERDICTION	48 5130
F-15	AIR INTERDICTION	71 8785
A-7	AIR INTERDICTION	64 6906
F-14	AIR INTERDICTION	53 9089
F-18	AIR INTERDICTION	89 8481
SH-3	ASW(SEA BASED)	6 9487
SH-2	ASW(SEA BASED)	17 3642
SH-60E	ASW(SEA BASED)	33 7637
S-3	ASW(SEA BASED)	43 4104
ATT. SUBS	ASW(SEA BASED)	28 9403
FRIGATES	ASW(SEA BASED)	20 2582
DESTROYERS	ASW(SEA BASED)	12 1549
M-48	ARMY GROUND	12 6556
M-60	ARMY GROUND	20 3894
M-1	ARMY GROUND	22 5993
M-551	ARMY GROUND	0 2260
M-901	ARMY GROUND	54 2384
M-2/M-3	ARMY GROUND	54 2384
M-113	ARMY GROUND	6 0265
MLRS	ARMY GROUND	16 9480
TOWED ART.	ARMY GROUND	22 5993
SELF-PROP.	ARMY GROUND	30 1324
PERSHING	ARMY GROUND	15 8195
GLCMs	ARMY GROUND	26 3659
INFANTRY	ARMY GROUND	60 2649
MORTERS	ARMY GROUND	26 3659
ROLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6216
F-18	5.5556
F-15	4.4444
A-7	4.0000
INFANTRY	3.7263
M-2/M-3	3.3537
M-901	3.3537
F-14	3.3333
A-6	3.0000
COBRA	2.9982
S-3	2.6842
SH-60E	2.0877
SELF-PROP.	1.8632
ATT. SUBS	1.7825
MORTERS	1.6303
GLCMs	1.6303
TOWED ART.	1.3974
M-1	1.3974
M-60	1.2576
FRIGATES	1.2526
SH-2	1.0737
MLRS	1.0480
PERSHING	0.9782
M-48	0.7825
DESTROYERS	0.7516
SH-3	0.4795
M-113	0.3726
RADIO FLAY	0.3686
ART. ACFT	0.2249
ROLES LNCH	0.0140
M-551	0.0140

PYRETHRUM		
ATT. SUBS	ASW(SEA BASED)	14.4701
M-48	ARMY GROUND	29.5143
M-60	ARMY GROUND	47.4536
M-113	ARMY GROUND	5.2732
TOWED ART.	ARMY GROUND	31.6390
SELF-PROP.	ARMY GROUND	42.1804
INFANTRY	ARMY GROUND	75.2311
MORTERS	ARMY GROUND	36.9112

NORMALIZED VALUES	
INFANTRY	10.0000
M-60	6.3000
SELF-PROP.	5.6000
MORTERS	4.9000
TOWED ART.	4.2000
M-48	3.9200
ATT. SUBS	1.9209
M-113	0.7000

ALL COMMODITIES

A-10	CAS	3.0912
COBRA	CAS	2.1012
F-4	AIR INTERDICTION	4.1412
	CAS	0.1811
F-16	AIR INTERDICTION	3.0548
	CAS	1.7173
ART. ACFT	CAS	0.1333
RADIO RLY	AIR INTERDICTION	0.1284
	CAS	0.1091
F-111	AIR INTERDICTION	5.4987
A-6	AIR INTERDICTION	1.6981
F-15	AIR INTERDICTION	2.4439
A-7	AIR INTERDICTION	2.1995
F-14	AIR INTERDICTION	1.9407
F-18	AIR INTERDICTION	3.2345
SH-3	ASW(SEA BASED)	0.2518
SH-2	ASW(SEA BASED)	0.6295
SH-60B	ASW(SEA BASED)	1.0467
S-3	ASW(SEA BASED)	1.4760
ATT. SUBS	ASW(SEA BASED)	1.2541
FRIGATES	ASW(SEA BASED)	0.7524
DSTROYERS	ASW(SEA BASED)	0.4515
M-48	ARMY GROUND	1.2656
M-60	ARMY GROUND	2.0339
M-1	ARMY GROUND	2.0339
M-551	ARMY GROUND	0.0128
M-901	ARMY GROUND	1.6272
M-2/M-3	ARMY GROUND	1.6272
M-113	ARMY GROUND	0.2260
MLRS	ARMY GROUND	0.6780
TOWED ART.	ARMY GROUND	1.2204
SELF-PROP.	ARMY GROUND	1.6272
PERSHING	ARMY GROUND	0.6780
GLCMs	ARMY GROUND	1.0546
INFANTRY	ARMY GROUND	2.4106
MORTERS	ARMY GROUND	1.2128
ROLES LNCH	ARMY GROUND	0.0226

NORMALIZED VALUES

F-111	10.0000
F-16	8.6787
F-4	8.0585
F-18	5.8824
A-10	5.6216
F-15	4.4444
INFANTRY	4.3839
A-7	4.0000
COBRA	3.8213
M-1	3.6989
M-60	3.6989
F-14	3.5294
A-6	3.0882
SELF-PROP.	2.9592
M-2/M-3	2.9592
M-901	2.9592
S-3	2.6842
M-48	2.3016
ATT. SUBS	2.2807
TOWED ART.	2.2194
MORTERS	2.2057
GLCMs	1.9180
SH-60B	1.9035
FRIGATES	1.3684
PERSHING	1.2330
MLRS	1.2330
SH-2	1.1447
DSTROYERS	0.8210
SH-3	0.4579
RADIO RLY	0.4337
M-113	0.4110
ART. ACFT	0.2425
ROLES LNCH	0.0411
M-551	0.0226

CRITICALITY OF SHORTFALL
ALL FE 3
(LOC 3)

COMMODITY	GOAL (UNITS)	STOCK FILE (UNITS)	SHORT FALL (%)	TRANS- LATED	FE/ COMMODITY IMPORT.	CRITIC- ALITY	MODIFIED FE SHORT- FALL CRITICALITY
COBALT	85.4	43.8	-48.7	402.5	8.5	3418.1	7.8
TIN	42.0	190.6	353.8	0.0	10.0	0.0	0.0
NICKEL	200.0	32.2	-83.9	437.7	10.0	4377.1	1.5
FLUORSPAR ACID	1400.0	895.0	-36.1	389.9	9.6	3744.2	6.6
MYRETHRUM	500.0	0.0	-100.0	453.8	4.1	1850.7	4.0

COMPOSITE IMPORTANCE
(LOC 3)

COBALT

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	%(1/CI)
FINLAND	1350.	6.43	1.92	0.520	3.341
MOROCCO	450.	2.14	1.50	0.667	1.404
BOTSWANA	250.	1.19	0.71	1.404	1.671
SOUTH AFRICA	150.	0.71	1.19	0.841	1.671
ZAIRE	12500.	59.52	1.92	0.520	30.953
PHILIPPINES	50.	0.24	0.92	1.087	0.207
AUSTRALIA	400.	1.90	0.92	1.087	2.373
NEW CALEDONIA	250.	1.19	0.92	1.087	1.243
CANADA	1100.	5.24	2.89	0.346	1.813
U.S.	4500.	21.43	2.56	0.391	9.319
TOTAL:	21000.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

TIN

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	%(1/CI)
AUSTRALIA	100.	0.15	0.92	1.087	0.161
U.S.	16100.	23.82	2.56	0.391	9.319
THAILAND	5900.	8.73	0.92	1.087	9.483
INDONESIA	5800.	8.58	0.92	1.087	9.322
UK	100.	0.15	1.96	0.510	0.075
PERU	10300.	15.24	0.98	1.020	15.543
BRAZIL	2400.	3.55	0.86	1.162	4.125
FRG	3000.	4.44	2.47	0.405	1.796
MALAYSIA	23900.	35.34	0.92	1.087	35.414
TOTAL:	67600.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

NICKEL

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1000	0.33	1.92	0.520	0.171
SOUTH AFRICA	5000	1.64	1.19	0.841	1.311
PHILIPPINES	5000	1.64	0.92	1.087	1.731
AUSTRALIA	25000	8.21	0.92	1.087	3.424
CANADA	150000	49.23	2.87	0.340	17.054
U.S.	88000	28.91	2.56	0.391	11.011
GREECE	600	0.20	1.91	0.510	0.171
NETHERLANDS	200	0.07	1.96	0.510	0.064
FRG	100	0.03	1.91	0.510	0.037
INDONESIA	500	0.16	1.96	0.510	0.064
USSR	5000	1.64	0.94	1.041	1.742
D.M. REPUBLIC	15000	4.93	1.53	0.650	1.211
COSTA RICA	4000	1.31	1.53	0.650	0.911
INDONESIA	5000	1.64	0.92	1.087	1.731
TOTAL:	304400	100.00			

COMPOSITE IMPORTANCE
(LOC 1)

FLUOROSULFONIC ACID

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	180	22.36	1.19	0.841	18.801
U.S.	70	8.70	2.56	0.391	3.402
ITALY	65	8.07	1.96	0.510	4.100
SPAIN	100	12.42	1.96	0.510	6.313
SOUTH AFRICA	25	3.11	0.71	1.404	4.250
THAILAND	15	1.86	0.92	1.087	2.025
MEXICO	350	43.49	2.56	0.391	17.011
TOTAL:	805	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

PYRETHRUM

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	2000	1.01	1.19	0.841	0.852
AUSTRALIA	1500	0.76	0.92	1.087	0.825
UK	11000	5.57	1.96	0.510	2.842
KENYA	80000	40.51	0.71	1.404	56.805
RWANDA	25000	12.66	0.71	1.404	17.767
TANZANIA	78000	39.49	0.71	1.404	55.423
TOTAL:	197500	100.00			

SOURCE IMPORTANCE
(LOC 3)

SOURCE	% (1/01) COMP IMF	FE SHORTFALL CRITICALITY	TOTAL	NORMALIZED 10/100
IDEALT				
FINLAND	3.343	7.81	26.11	10.68
MOROCCO	1.428	7.81	11.16	4.5
BOTSWANNA	1.671	7.81	13.05	5.34
SOUTH AFRICA	0.601	7.81	4.69	1.82
ZAIRE	30.950	7.81	241.74	98.90
PHILIPPINES	0.258	7.81	2.02	0.81
AUSTRALIA	2.070	7.81	16.16	6.62
NEW CALEDONIA	1.283	7.81	10.10	4.1
CANADA	1.813	7.81	14.16	5.78
U.S.	8.394	7.81	65.47	26.19
TIN				
AUSTRALIA	0.161	0.00	0.00	0.00
U.S.	9.319	0.00	0.00	0.00
THAILAND	9.483	0.00	0.00	0.00
INDONESIA	9.322	0.00	0.00	0.00
UK	0.075	0.00	0.00	0.00
BOLIVIA	15.543	0.00	0.00	0.00
BRAZIL	4.125	0.00	0.00	0.00
FRG	1.793	0.00	0.00	0.00
MALAYSIA	38.414	0.00	0.00	0.00
NICKEL				
FINLAND	0.171	10.00	1.71	0.70
SOUTH AFRICA	1.381	10.00	13.81	5.65
PHILIPPINES	1.785	10.00	17.85	7.31
AUSTRALIA	8.924	10.00	89.24	35.51
CANADA	17.054	10.00	170.54	69.81
U.S.	11.311	10.00	113.11	46.30
GREECE	0.101	10.00	1.01	0.41
NETHERLANDS	0.034	10.00	0.34	0.14
FRG	0.017	10.00	0.17	0.07
YUGOSLAVIA	0.084	10.00	0.84	0.34
USSR	1.742	10.00	17.42	7.13
DOM. REPUB.	3.230	10.00	32.30	13.22
GUATAMALA	0.861	10.00	8.61	3.53
INDONESIA	1.785	10.00	17.85	7.31
FLUORESPAR ACID				
SOUTH AFRICA	18.803	8.55	160.85	65.84
U.S.	3.402	8.55	29.10	11.91
ITALY	4.120	8.55	35.24	14.43
SPAIN	6.338	8.55	54.22	22.19
EAST AFRICA	4.359	8.55	37.29	15.26
THAILAND	2.025	8.55	17.32	7.05
MEXICO	17.011	8.55	145.52	59.57
P. RETHRUM				
SOUTH AFRICA	0.852	4.30	3.66	1.50
AUSTRALIA	0.825	4.30	3.55	1.45
UK	2.842	4.30	12.21	5.00
KENYA	56.855	4.30	244.29	100.00
RWANDA	17.767	4.30	76.34	31.25
TANZANIA	55.433	4.30	238.18	97.50

SOURCE IMPORTANCE
RANKED BY SOURCE
(LOC 3)

SOURCE	COMMODITY	VALUE
KENYA	PYRETHRUM	100.00
ZAIRE	COBALT	98.96
TANZANIA	PYRETHRUM	97.50
CANADA	NICKEL	69.81
SOUTH AFRICA	FLUORSPAR ACID	65.84
MEXICO	FLUORSPAR ACID	59.57
U S	NICKEL	47.31
AUSTRALIA	NICKEL	36.53
RWANDA	PYRETHRUM	31.25
U S	COBALT	26.80
SPAIN	FLUORSPAR ACID	22.19
EAST AFRICA	FLUORSPAR ACID	15.26
ITALY	FLUORSPAR ACID	14.43
DOM. REPUB.	NICKEL	13.22
U S	FLUORSPAR ACID	11.91
FINLAND	COBALT	10.69
INDONESIA	NICKEL	7.31
PHILIPPINES	NICKEL	7.31
USSR	NICKEL	7.13
THAILAND	FLUORSPAR ACID	7.09
AUSTRALIA	COBALT	6.62
CANADA	COBALT	5.73
SOUTH AFRICA	NICKEL	5.65
BOTSWANNA	COBALT	5.34
UK	PYRETHRUM	5.00
MOROCCO	COBALT	4.57
NEW CALEDONIA	COBALT	4.13
GUATAMALA	NICKEL	3.53
SOUTH AFRICA	COBALT	1.92
SOUTH AFRICA	PYRETHRUM	1.50
AUSTRALIA	PYRETHRUM	1.45
PHILIPPINES	COBALT	0.83
FINLAND	NICKEL	0.70
GREECE	NICKEL	0.41
YUGOSLAVIA	NICKEL	0.34
NETHERLANDS	NICKEL	0.14
FRG	NICKEL	0.07
MALAYSIA	TIN	0.00
PRC	TIN	0.00
BRAZIL	TIN	0.00
BOLIVIA	TIN	0.00
UK	TIN	0.00
INDONESIA	TIN	0.00
THAILAND	TIN	0.00
U S	TIN	0.00
AUSTRALIA	TIN	0.00
U S	TIN	0.00

SCENARIO 22

WEIGHTS on REGION by LEVEL of CONFLICT and MEDIA

Level of Conflict 3 Media 1

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	7.0	5.0	7.0	2.0	2.0	5.0	2.0	1.0
I/COEF	0.1786	0.1786	0.1250	0.0833	0.1250	0.0357	0.0357	0.0833	0.0357	0.1071

Level of Conflict 3 Media 2

Region	1	2	3	4	5	6	7	8	9	10
Region 11										
Weight	10.0	10.0	9.0	4.0	7.0	5.0	1.0	8.0	7.0	5.0
Weight	9.0									
I/COEF	0.1333	0.1333	0.1200	0.0533	0.0933	0.0667	0.0133	0.1067	0.0933	0.0667
I/COEF	0.1200									

Level of Conflict 3 Media 3

Region	1	2	3	4	5	6	7
Weight	10.0	10.0	10.0	8.0	6.0	4.0	8.0
I/COEF	0.1786	0.1786	0.1786	0.1429	0.1071	0.0714	0.1429

Level of Conflict 3 Media 4

Region	1	2	3	4
Weight	10.0	4.0	2.0	1.0
I/COEF	0.5882	0.2353	0.1176	0.0588

INFLUENCE COEFFICIENTS OVER ALL LEVEL OF CONFLICTS

on the Importance of Controlling EACH region within its Media

Media 1										
Region	1	2	3	4	5	6	7	8	9	10
I/COEF	0.0228	0.0228	0.0160	0.0114	0.0160	0.0046	0.0046	0.0114	0.0046	0.0114

Media 2										
Region	1	2	3	4	5	6	7	8	9	10

Media 11										
Region	1	2	3	4	5	6	7	8	9	10
I/COEF	0.0171	0.0171	0.0154	0.0068	0.0119	0.0085	0.0017	0.0126	0.0119	0.0119
I/COEF	0.0154									

Media 3							
Region	1	2	3	4	5	6	7
I/COEF	0.0228	0.0228	0.0228	0.0183	0.0137	0.0091	0.0183

Media 4				
Region	1	2	3	4
I/COEF	0.0752	0.0301	0.0150	0.0075

Importance of controlling ANY Region within its Media as compared to the Importance of controlling ANY Region of any other Media

Media 1										
Region	1	2	3	4	5	6	7	8	9	10
I/COEF	0.0099	0.0099	0.0070	0.0050	0.0070	0.0020	0.0020	0.0050	0.0020	0.0020

Media 2										
Region	1	2	3	4	5	6	7	8	9	10

Media 11										
Region	1	2	3	4	5	6	7	8	9	10
I/COEF	0.0037	0.0037	0.0033	0.0015	0.0026	0.0019	0.0004	0.0030	0.0026	0.0019
I/COEF	0.0033									

Media 3							
Region	1	2	3	4	5	6	7
I/COEF	0.0060	0.0060	0.0060	0.0048	0.0036	0.0024	0.0048

Media 4				
Region	1	2	3	4
I/COEF	0.0065	0.0026	0.0013	0.0007

FORCE ELEMENT IMPORTANCE
(LOC 3)

RAW INS	ELEMENT NUMBER	FORCE ELEMENT NAME	CALCULATED VALUE	NORMALIZED VALUE
1	17	CARRIER BATTLE GROUP	0.141	10.000
2	1	AIR INTERDICTION	0.117	8.264
3	3	ARMY GROUND	0.104	7.380
4	16	ATTACK SUB	0.072	5.130
5	19	SURFACE COMBATANTS	0.060	4.249
6	12	THEATER NUCLEAR WEAPON	0.054	3.811
7	8	RAPID DEPLOY	0.052	3.706
8	6	CAS	0.044	3.131
9	14	ASW(LAND BASED)	0.043	3.093
10	22	AIR SUPERIORITY(LAND BASED)	0.041	2.910
11	15	ASW(SEA BASED)	0.043	2.315
12	23	AIR SUPERIORITY(SHIP BASED)	0.032	2.271
13	21	AIR DEFENSE(SHIP BASED)	0.019	2.065
14	10	STRATEGIC BOMBER	0.025	1.794
15	25	SPEE BASED WEAPON(AIR CNTRL)	0.020	1.412
16	29	ASAT(SPACE BASED)	0.013	0.914
17	18	MINE WARFARE	0.013	0.891
18	2	AMPHIBIOUS ASSAULT	0.011	0.759
19	13	SPECIAL OPERATIONS	0.010	0.725
20	28	ASAT(LAND BASED)	0.007	0.510
21	20	AIR DEFENSE(LAND BASED)	0.004	0.278
22	9	SPEE-BASED WEAPON(LND CNTRL)	0.003	0.212
23	30	SPEE BASED WEAPON(SEA CNTRL)	0.002	0.118
24	27	ABM(SPACE BASED)	0.000	0.000
25	26	ABM(LAND BASED)	0.000	0.000
26	24	INTERCEPTOR AIRCRAFT	0.000	0.000
27	11	SLBM	0.000	0.000
28	7	ICBM	0.000	0.000
29	5	CIVIL DEFENSE	0.000	0.000
30	4	CBW	0.000	0.000

COMMODITY IMPORTANCE
(LOC 3)

COBALT

AIR INTERDICTION	5.71
ARMY GROUND	4.52
CAS	1.75
ICBM	0.00
STRATEGIC BOMBER	1.79
SLBM	0.00
ASW(SEA BASED)	1.27
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ASAT(LAND BASED)	0.51

	34.99

TIN

AIR INTERDICTION	5.90
ARMY GROUND	1.92
CAS	1.91
STRATEGIC BOMBER	1.79
ASW(LAND BASED)	3.02
ASW(SEA BASED)	1.11
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00

	41.18

NICKEL

AIR INTERDICTION	5.60
ARMY GROUND	4.92
CAS	1.72
STRATEGIC BOMBER	1.79
ASW(SEA BASED)	1.71
ATTACK SUBS	5.13
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.89
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00

	41.21

FLUORSPAR ACID

AIR INTERDICTION	7.13
AMPHIBIOUS ASSAULT	0.76
ARMY GROUND	3.69
CAS	2.05
ICBM	0.00
STRATEGIC BOMBER	1.79
SLEM	0.00
ASW(LAND BASED)	3.08
ASW(SEA BASED)	1.63
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
AIR SUPERIORITY(LAND BASED)	2.91
AIR SUPERIORITY(SHIP BASED)	2.28
INTERCEPTOR AIRCRAFT	0.00
ARM(LAND BASED)	0.00
	39.57

PYRETHRUM

ARMY GROUND	2.68
CIVIL DEFENSE	0.00
ASW(SEA BASED)	0.14
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.25
	17.08

COMMODITY NORMALIZED IMPORTANCE

NICKEL	10.00	(41.21)
TIN	9.99	(41.18)
FLUORSPAR ACID	9.60	(39.57)
COBALT	8.49	(34.99)
PYRETHRUM	4.14	(17.08)

COBALT		
A-10	CAS	72 7336
COBRA	CAS	48 4891
F-4	AIR INTERDICTION	103 5050
	CAS	7 2734
F-16	AIR INTERDICTION	71 8785
	CAS	40 4075
ART. ACFT	CAS	3 6367
RADIO RLY	AIR INTERDICTION	3 2345
	CAS	2 7275
F-111	AIR INTERDICTION	129 3813
A-6	AIR INTERDICTION	38 8144
F-15	AIR INTERDICTION	57 5028
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	43 1271
F-18	AIR INTERDICTION	71 8785
SH-3	ASW(SEA BASED)	6 0775
SH-2	ASW(SEA BASED)	15 1937
SH-60B	ASW(SEA BASED)	23 6346
S-3	ASW(SEA BASED)	34 7284
ATT. SUBS	ASW(SEA BASED)	24 1169
FRIGATES	ASW(SEA BASED)	14 4701
DESTROYERS	ASW(SEA BASED)	8 6821
M-48	ARMY GROUND	37 9669
M-60	ARMY GROUND	61 0182
M-1	ARMY GROUND	67 7980
M-551	ARMY GROUND	0 2260
M-901	ARMY GROUND	54 2384
M-2/M-3	ARMY GROUND	47 4586
M-113	ARMY GROUND	5 2732
MLRS	ARMY GROUND	20 3394
TOWED ART.	ARMY GROUND	27 1192
SELF-PROP.	ARMY GROUND	36 1589
PERSHING	ARMY GROUND	18 0795
GLCMS	ARMY GROUND	30 1324
INFANTRY	ARMY GROUND	7 5931
MORTERS	ARMY GROUND	36 9122
ROLES LNCH	ARMY GROUND	1 5820

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6216
F-18	5.5556
M-1	5.2402
M-60	4.7162
F-15	4.4444
M-901	4.1921
A-7	4.0000
COBRA	3.7478
M-2/M-3	3.6681
F-14	3.3333
A-6	3.0000
M-48	2.9345
MORTERS	2.8530
SELF-PROP.	2.7948
S-3	2.6842
GLCMS	2.3290
TOWED ART.	2.0961
ATT. SUBS	1.8640
SH-60B	1.8267
MLRS	1.5721
PERSHING	1.3974
SH-2	1.1743
FRIGATES	1.1194
DESTROYERS	0.6710
INFANTRY	0.5827
SH-3	0.4697
RADIO RLY	0.4603
M-113	0.4076
ART. ACFT	0.2811
ROLES LNCH	0.1223
M-551	0.0175

TIN		
A-10	CAS	72 7336
COBRA	CAS	64 6521
F-4	AIR INTERDICTION	103 5050
	CAS	7 2734
F-16	AIR INTERDICTION	71 8725
	CAS	40 4075
ART. ACRFT	CAS	3 6367
RADIO RLAY	AIR INTERDICTION	3 2345
	CAS	2 7275
F-111	AIR INTERDICTION	129 3813
A-6	AIR INTERDICTION	43 6482
F-15	AIR INTERDICTION	57 5023
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	48 5180
F-18	AIR INTERDICTION	80 8431
SH-3	ASW (SEA BASED)	5 2093
SH-2	ASW (SEA BASED)	13 0231
SH-60B	ASW (SEA BASED)	20 2542
S-3	ASW (SEA BASED)	34 7284
ATT. SUBS	ASW (SEA BASED)	14 4701
FRIGATES	ASW (SEA BASED)	14 4701
DESTROYERS	ASW (SEA BASED)	8 6821
M-48	ARMY GROUND	4 2185
M-60	ARMY GROUND	6 7798
M-1	ARMY GROUND	37 6655
M-551	ARMY GROUND	0 0753
M-901	ARMY GROUND	6 7798
M-2/M-3	ARMY GROUND	6 7798
M-113	ARMY GROUND	0 7533
MLRS	ARMY GROUND	10 1697
TOWED ART.	ARMY GROUND	4 5199
SELF-PROP.	ARMY GROUND	6 0265
PERSHING	ARMY GROUND	15 8195
GLCMs	ARMY GROUND	26 3659
INFANTRY	ARMY GROUND	60 2649
MORTERS	ARMY GROUND	5 2732
POLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
F-18	6.2500
A-10	5.6216
COBRA	4.9970
INFANTRY	4.6579
F-15	4.4444
A-7	4.0000
F-14	3.7500
A-6	3.3750
M-1	2.9112
S-3	2.6842
GLCMs	2.0378
SH-60B	1.5658
PERSHING	1.2227
FRIGATES	1.1184
ATT. SUBS	1.1184
SH-2	1.0066
MLRS	0.7860
DESTROYERS	0.6710
M-2/M-3	0.5240
M-901	0.5240
M-60	0.5240
SELF-PROP.	0.4658
RADIO RLAY	0.4608
MORTERS	0.4076
SH-3	0.4076
TOWED ART.	0.3493
M-48	0.3261
ART. ACRFT	0.2311
M-113	0.0582
POLES LNCH	0.0175
M-551	0.0053

NICKEL		
A-10	CAS	72 7336
COBRA	CAS	43 4891
F-4	AIR INTERDICTION	77 6188
	CAS	5 4511
F-16	AIR INTERDICTION	71 8785
	CAS	40 4075
ART ACFT	CAS	2 4145
RADIO RLY	AIR INTERDICTION	3 2145
	CAS	2 7275
F-111	AIR INTERDICTION	129 3813
A-6	AIR INTERDICTION	38 8144
F-15	AIR INTERDICTION	57 5018
A-7	AIR INTERDICTION	51 7525
F-14	AIR INTERDICTION	48 5180
F-18	AIR INTERDICTION	80 8633
SH-3	ASW(SEA BASED)	6 9457
SH-2	ASW(SEA BASED)	17 3642
SH-60B	ASW(SEA BASED)	27 0139
S-3	ASW(SEA BASED)	34 7284
ATT. SUBS	ASW(SEA BASED)	43 4104
FRIGATES	ASW(SEA BASED)	26 0463
DESTROYERS	ASW(SEA BASED)	15 6278
M-48	ARMY GROUND	42 1854
M-60	ARMY GROUND	67 7960
M-1	ARMY GROUND	75 3311
M-551	ARMY GROUND	0 7533
M-901	ARMY GROUND	47 4586
M-2/M-3	ARMY GROUND	54 2384
M-113	ARMY GROUND	5 2732
MLRS	ARMY GROUND	20 3394
TOWED ART	ARMY GROUND	36 1589
SELF-PROP.	ARMY GROUND	48 2119
PERSHING	ARMY GROUND	18 0795
GLCMs	ARMY GROUND	22 5943
INFANTRY	ARMY GROUND	37 6655
MORTERS	ARMY GROUND	15 8195
ROLES LNCH	ARMY GROUND	0 2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6797
F-4	6.4216
F-18	6.2500
M-1	5.8224
A-10	5.6216
M-60	5.2402
F-15	4.4444
M-2/M-3	4.1921
A-7	4.0000
F-14	3.7500
COBRA	3.7478
SELF-PROP.	3.7263
M-901	3.6681
ATT. SUBS	3.3552
M-48	3.2605
A-6	3.0000
INFANTRY	2.9112
TOWED ART.	2.7948
S-3	2.6842
SH-60B	2.0877
FRIGATES	2.0131
GLCMs	1.7467
MLRS	1.5721
PERSHING	1.3974
SH-2	1.3421
MORTERS	1.2227
DESTROYERS	1.2079
SH-3	0.5368
RADIO RLY	0.4608
M-113	0.4074
ART. ACFT	0.1974
M-551	0.0582
ROLES LNCH	0.0125

FLUORSPAR ACID		
A-10	CAS	90.8170
COBRA	CAS	48.4811
F-4	AIR INTERDICTION	129.3813
	CAS	9.0917
F-16	AIR INTERDICTION	89.8481
	CAS	50.5094
ART. ACFT	CAS	3.6367
RADIO BLAY	AIR INTERDICTION	3.2343
	CAS	2.7275
F-111	AIR INTERDICTION	141.7266
A-6	AIR INTERDICTION	48.5180
F-15	AIR INTERDICTION	71.8787
A-7	AIR INTERDICTION	64.6906
F-14	AIR INTERDICTION	53.9089
F-18	AIR INTERDICTION	89.8481
SH-3	ASW(SEA BASED)	6.9457
SH-2	ASW(SEA BASED)	17.3642
SH-60B	ASW(SEA BASED)	33.7437
S-3	ASW(SEA BASED)	43.4104
ATT. SUBS	ASW(SEA BASED)	28.9403
FRIGATES	ASW(SEA BASED)	20.2582
DSTROYERS	ASW(SEA BASED)	12.1549
M-48	ARMY GROUND	12.6556
M-60	ARMY GROUND	20.3394
M-1	ARMY GROUND	22.5993
M-551	ARMY GROUND	0.2260
M-901	ARMY GROUND	54.2384
M-2/M-3	ARMY GROUND	54.2384
M-113	ARMY GROUND	6.0265
MLRS	ARMY GROUND	16.9495
TOWED ART.	ARMY GROUND	22.5993
SELF-PROP.	ARMY GROUND	30.1324
PERSHING	ARMY GROUND	15.8195
GLCMs	ARMY GROUND	26.3659
INFANTRY	ARMY GROUND	60.2649
MORTERS	ARMY GROUND	26.3659
RCLES LNCH	ARMY GROUND	0.2260

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.5622
A-10	5.6216
F-18	5.5556
F-15	4.4444
A-7	4.0000
INFANTRY	3.7263
M-2/M-3	3.3537
M-901	3.3537
F-14	3.3333
A-6	3.0000
COBRA	2.9982
S-3	2.6842
SH-60B	2.0877
SELF-PROP	1.8632
ATT. SUBS	1.7895
MORTERS	1.6303
GLCMs	1.6303
TOWED ART.	1.3974
M-1	1.3974
M-60	1.2576
FRIGATES	1.2526
SH-2	1.0737
MLRS	1.0480
PERSHING	0.9782
M-48	0.7825
DSTROYERS	0.7516
SH-3	0.4295
M-113	0.3726
RADIO BLAY	0.3686
ART. ACFT	0.2749
RCLES LNCH	0.0140
M-551	0.0140

RYRETHROM		
ATT. SUBS	AEW (SEA BASED)	14 4701
M-48	ARMY GROUND	28 5098
M-60	ARMY GROUND	47 4586
M-113	ARMY GROUND	5 2732
TOWED ART.	ARMY GROUND	31 6390
SELF-PROP.	ARMY GROUND	42 1854
INFANTRY	ARMY GROUND	75 3311
MORTERS	ARMY GROUND	36 9122

NORMALIZED VALUES

INFANTRY	10 0000
M-60	6 3000
SELF-PROP.	5 6000
MORTERS	4 9000
TOWED ART	4 2000
M-48	3 9200
ATT. SUBS	1 9209
M-113	0 7000

ALL COMMODITIES

A-10	CAS	3 0912
COBRA	CAS	2 1011
F-4	AIR INTERDICTION	4 1402
	CAS	0 2909
F-16	AIR INTERDICTION	3 0548
	CAS	1 7173
ART. ACFT	CAS	0 1333
RADIO FLAY	AIR INTERDICTION	0 1294
	CAS	0 1091
F-111	AIR INTERDICTION	5 4957
A-6	AIR INTERDICTION	1 4991
F-15	AIR INTERDICTION	2 4439
A-7	AIR INTERDICTION	2 1955
F-14	AIR INTERDICTION	1 9407
F-18	AIR INTERDICTION	3 2345
SH-3	ASW(SEA BASED)	0 2518
SH-2	ASW(SEA BASED)	0 6295
SH-60B	ASW(SEA BASED)	1 0457
S-3	ASW(SEA BASED)	1 4760
ATT. SUBS	ASW(SEA BASED)	1 2541
FRIGATES	ASW(SEA BASED)	0 7524
DESTROYERS	ASW(SEA BASED)	0 4515
M-48	ARMY GROUND	1 2656
M-60	ARMY GROUND	2 0339
M-1	ARMY GROUND	2 0339
M-551	ARMY GROUND	0 0109
M-901	ARMY GROUND	1 6272
M-2/M-3	ARMY GROUND	1 6272
M-113	ARMY GROUND	0 2260
MLRS	ARMY GROUND	0 6780
TOWED ART.	ARMY GROUND	1 2204
SELF-PROP	ARMY GROUND	1 6272
PERSHING	ARMY GROUND	0 6780
GLCMs	ARMY GROUND	1 0546
INFANTRY	ARMY GROUND	2 4106
MORTERS	ARMY GROUND	1 2128
ROLES LNCH	ARMY GROUND	0 0226

NORMALIZED VALUES	
F-111	10.0000
F-16	8.6787
F-4	8.0585
F-15	5.8824
A-10	5.6216
F-14	4.4444
INFANTRY	4.3839
A-7	4.0000
COBRA	3.8213
M-1	3.6989
M-60	3.6989
F-14	3.5294
A-6	3.0682
SELF-PROP	2.9592
M-2/M-3	2.9592
M-901	2.9592
S-3	2.6842
M-48	2.3016
ATT. SUBS	2.2907
TOWED ART.	2.2194
MORTERS	2.2057
GLCMs	1.9190
SH-60B	1.9035
FRIGATES	1.3484
PERSHING	1.2930
MLRS	1.2930
SH-2	1.1147
DESTROYERS	0.8210
SH-3	0.4579
RADIO FLAY	0.4337
M-113	0.4110
ART. ACFT	0.3475
ROLES LNCH	0.0411
M-551	0.0000

CRITICALITY OF SHORTFALL

ALL FE'S

(LOC 3)

COMMODITY	GOAL (UNITS)	STOCK FILE (UNITS)	SHORT FALL (%)	TRANS- LATED	FE/ IMPORT.	CRITIC- ALITY	FE'S CRITICALITY
COBALT	85.4	43.8	-48.7	402.5	8.5	3418.1	7.8
TIN	42.0	190.6	353.8	0.0	10.0	0.0	0.0
NICKEL	200.0	32.2	-83.9	437.7	10.0	4377.1	10.0
FLUORSPAR ACID	1400.0	895.0	-35.1	389.9	9.6	3744.3	9.6
PERETHRUM	500.0	0.0	-100.0	453.8	4.1	1863.7	4.3

COMPOSITE IMPORTANCE

(LOC 3)

COBALT

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
ZAMBIA	12500.	71.43	1.92	0.520	37.143
ZAMBIA	2900.	16.57	0.71	1.424	13.260
CANADA	1100.	6.29	2.89	0.346	3.175
USA	1000.	5.71	2.56	0.391	3.210

TOTAL: 17500 100.00

COMPOSITE IMPORTANCE

(LOC 3)

TIN

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
AUSTRALIA	100.	0.15	0.92	1.087	0.161
USA	16100.	23.82	2.56	0.391	3.219
THAILAND	5900.	8.73	0.92	1.087	9.483
INDONESIA	5800.	8.58	0.92	1.087	9.322
UK	100.	0.15	1.96	0.510	0.075
PHILIPPA	10300.	15.24	0.98	1.020	15.548
BRAZIL	2400.	3.55	0.86	1.162	4.125
PRC	3000.	4.44	2.47	0.405	1.796
MALAYSIA	23900.	35.36	0.92	1.087	38.414

TOTAL: 67600 100.00

COMPOSITE IMPORTANCE
(LOC 3)

NICKEL

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
FINLAND	1000	0.33	1.92	0.520	0.171
SOUTH AFRICA	5000	1.64	1.19	0.841	1.391
PHILIPPINES	5000	1.64	0.92	1.087	1.717
AUSTRALIA	25000	8.21	0.92	1.087	1.612
CANADA	150000	49.23	2.99	0.346	1.004
U.S.	88000	28.91	2.56	0.391	11.311
SWEDEN	600	0.20	1.96	0.510	0.100
NETHERLANDS	200	0.07	1.96	0.510	0.034
FRG	100	0.03	1.96	0.510	0.017
YUGOSLAVIA	500	0.16	1.96	0.510	0.004
USSR	5000	1.64	0.94	1.061	1.741
DOM. REPUB.	15000	4.93	1.53	0.656	1.200
GUATEMALA	4000	1.31	1.53	0.656	0.311
INDONESIA	5000	1.64	0.92	1.057	1.703

TOTAL: 304400. 100.00

COMPOSITE IMPORTANCE
(LOC 3)

FLUOREPAR ACID

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	180	22.36	1.19	0.841	10.313
U.S.	70	8.70	2.56	0.391	3.402
ITALY	65	8.07	1.96	0.510	4.120
FRANCE	100	12.42	1.96	0.510	6.300
EAST AFRICA	25	3.11	0.71	1.404	4.309
THAILAND	15	1.86	0.92	1.087	2.025
MEXICO	350	43.48	2.56	0.391	17.011

TOTAL: 805. 100.00

COMPOSITE IMPORTANCE
(LOC 3)

PYRETHRUM

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	% (1/CI)
SOUTH AFRICA	2000	1.01	1.19	0.841	0.852
AUSTRALIA	1500	0.76	0.92	1.087	0.825
U.S.	11000	5.57	1.96	0.510	2.842
KENYA	80000	40.51	0.71	1.404	56.800
RWANDA	25000	12.66	0.71	1.404	17.767
TANZANIA	78000	39.49	0.71	1.404	55.433

TOTAL: 197500. 100.00

SOURCE IMPORTANCE
(LOC 3)

SOURCE	1/1/01 COMP INF	FE (SHORTFALL CRITICALITY	TOTAL	NORMALIZED TO 100
C O BALT				
ZAIRE	37.148	7.81	290.09	100.00
ZAMBIA	23.260	7.81	181.64	62.61
CANADA	2.175	7.81	16.99	5.86
U S	2.236	7.81	17.46	6.01
TIN				
AUSTRALIA	0.161	0.00	0.01	0.00
U S	9.319	0.00	0.00	0.00
THAILAND	9.483	0.00	0.00	0.00
INDONESIA	9.312	0.00	0.00	0.00
UK	0.075	0.00	0.00	0.00
BOLIVIA	15.548	0.00	0.00	0.00
BRAZIL	4.125	0.00	0.00	0.00
FRG	1.796	0.00	0.00	0.00
MALAYSIA	38.414	0.00	0.00	0.00
C O C O P E L				
FINLAND	0.171	10.00	1.71	0.58
SOUTH AFRICA	1.301	10.00	13.81	4.74
PHILIPPINES	1.785	10.00	17.85	6.15
AUSTRALIA	8.914	10.00	89.24	30.76
CANADA	17.054	10.00	170.54	58.79
U S	11.311	10.00	113.11	38.99
GREECE	0.101	10.00	1.01	0.35
NETHERLANDS	0.034	10.00	0.34	0.12
FRG	0.017	10.00	0.17	0.06
YUGOSLAVIA	0.084	10.00	0.84	0.29
USSR	1.742	10.00	17.42	6.01
DOM REPUB	3.230	10.00	32.30	11.14
GUATAMALA	0.801	10.00	8.61	2.97
INDONESIA	1.785	10.00	17.85	6.15
FLUORSPAR ACID				
SOUTH AFRICA	18.803	8.55	160.85	55.45
U S	3.402	8.55	29.10	10.03
ITALY	4.120	8.55	35.24	12.15
SPAIN	6.338	8.55	54.22	18.69
EAST AFRICA	4.359	8.55	37.29	12.85
THAILAND	2.025	8.55	17.32	5.97
MEXICO	17.011	8.55	145.52	50.16
P Y R E T H R U M				
SOUTH AFRICA	0.852	4.30	3.66	1.26
AUSTRALIA	0.825	4.30	3.55	1.22
UK	2.842	4.30	12.21	4.21
KENYA	56.855	4.30	244.29	84.21
RWANDA	17.767	4.30	76.34	26.32
TANZANIA	55.433	4.30	238.18	82.11

SOURCE IMPORTANCE
RANKED BY SOURCE
(LOC 3)

#	SOURCE	COMMODITY	VALUE
1	ZAIRE	COBALT	100.00
2	KENYA	PYRETHRUM	84.21
3	TANZANIA	PYRETHRUM	82.11
4	ZAMBIA	COBALT	42.61
5	CANADA	NICKEL	58.72
6	SOUTH AFRICA	FLUORSPAR ACID	55.45
7	MEXICO	FLUORSPAR ACID	50.16
8	U S	NICKEL	38.99
9	AUSTRALIA	NICKEL	30.76
10	RWANDA	PYRETHRUM	26.32
11	SPAIN	FLUORSPAR ACID	18.69
12	EAST AFRICA	FLUORSPAR ACID	12.85
13	ITALY	FLUORSPAR ACID	12.15
14	DOM. REPUB.	NICKEL	11.14
15	U S	FLUORSPAR ACID	10.03
16	INDONESIA	NICKEL	6.15
17	PHILIPPINES	NICKEL	6.15
18	U S	COBALT	6.03
19	USSR	NICKEL	6.01
20	THAILAND	FLUORSPAR ACID	5.97
21	CANADA	COBALT	5.86
22	SOUTH AFRICA	NICKEL	4.76
23	UK	PYRETHRUM	4.21
24	GUATAMALA	NICKEL	2.97
25	SOUTH AFRICA	PYRETHRUM	1.26
26	AUSTRALIA	PYRETHRUM	1.22
27	FINLAND	NICKEL	0.59
28	GREECE	NICKEL	0.35
29	YUGOSLAVIA	NICKEL	0.29
30	NETHERLANDS	NICKEL	0.12
31	FRG	NICKEL	0.06
32	MALAYSIA	TIN	0.00
33	PRC	TIN	0.00
34	BRAZIL	TIN	0.00
35	BOLIVIA	TIN	0.00
36	UK	TIN	0.00
37	INDONESIA	TIN	0.00
38	THAILAND	TIN	0.00
39	U S	TIN	0.00
40	AUSTRALIA	TIN	0.00

SCENARIO 23

WEIGHTS on REGION by LEVEL of CONFLICT and MEDIA

Level of Conflict 2 Media 1

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	7.0	5.0	7.0	10.0	1.0	5.0	2.0	1.0
I/COEF	0.1543	0.1543	0.1094	0.0781	0.1094	0.1543	0.0313	0.0781	0.0313	0.0313

Level of Conflict 3 Media 2

Region	1	2	3	4	5	6	7	8	9	10
Weight	10.0	10.0	9.0	4.0	7.0	5.0	10.0	8.0	7.0	5.0
I/COEF	0.1190	0.1190	0.1071	0.0476	0.0833	0.0545	0.1190	0.0952	0.0833	0.0545

Level of Conflict 3 Media 3

Region	1	2	3	4	5	6	7
Weight	10.0	10.0	10.0	10.0	4.0	4.0	10.0
I/COEF	0.1667	0.1667	0.1667	0.1667	0.1000	0.0667	0.1667

Level of Conflict 3 Media 4

Region	1	2	3	4
Weight	10.0	4.0	2.0	1.0
I/COEF	0.5882	0.2353	0.1176	0.0588

INFLUENCE COEFFICIENTS OVER ALL LEVEL OF CONFLICTS

on the Importance of Controlling EACH region within its own Media

Media 1	Region	1	2	3	4	5	6	7	8	9	10
I/COEF		0.0200	0.0200	0.0140	0.0100	0.0140	0.0200	0.0040	0.0100	0.0040	0.0100

Media 2	Region	1	2	3	4	5	6	7	8	9	10
I/COEF		0.0152	0.0152	0.0137	0.0061	0.0107	0.0076	0.0152	0.0122	0.0107	0.0076

Media 3	Region	1	2	3	4	5	6	7
I/COEF		0.0213	0.0213	0.0213	0.0213	0.0128	0.0085	0.0213

Media 4	Region	1	2	3	4
I/COEF		0.0752	0.0301	0.0150	0.0075

Media 1	Region	1	2	3	4	5	6	7	8	9	10
I/COEF		0.0087	0.0087	0.0061	0.0043	0.0061	0.0087	0.0017	0.0043	0.0017	0.0052

Media 2	Region	1	2	3	4	5	6	7	8	9	10
I/COEF		0.0033	0.0033	0.0030	0.0013	0.0023	0.0017	0.0033	0.0026	0.0023	0.0017

Media 3	Region	1	2	3	4	5	6	7
I/COEF		0.0056	0.0056	0.0056	0.0056	0.0033	0.0022	0.0056

Media 4	Region	1	2	3	4
I/COEF		0.0065	0.0026	0.0013	0.0007

Media 1	Region	1	2	3	4	5	6	7	8	9	10
I/COEF		0.0087	0.0087	0.0061	0.0043	0.0061	0.0087	0.0017	0.0043	0.0017	0.0052

Media 2	Region	1	2	3	4	5	6	7	8	9	10
I/COEF		0.0033	0.0033	0.0030	0.0013	0.0023	0.0017	0.0033	0.0026	0.0023	0.0017

Media 3	Region	1	2	3	4	5	6	7
I/COEF		0.0056	0.0056	0.0056	0.0056	0.0033	0.0022	0.0056

Media 4	Region	1	2	3	4
I/COEF		0.0065	0.0026	0.0013	0.0007

FORCE ELEMENT IMPORTANCE
(LOC 3)

RANKING	ELEMENT NUMBER	FORCE ELEMENT NAME	CALCULATED VALUE	NORMALIZED VALUE
1	17	CARRIER BATTLE GROUP	0.138	10.000
2	1	AIR INTERDICTION	0.110	7.954
3	3	ARMY GROUND	0.095	6.845
4	16	ATTACH BUIS	0.073	5.207
5	19	SURFACE COMBATANTS	0.060	4.292
6	8	RAPID DEPLOY	0.058	4.149
7	12	THEATER NUCLEAR WEAPON	0.054	3.859
8	14	ASW(LAND BASED)	0.043	3.046
9	6	CAS	0.040	2.902
10	22	AIR SUPERIORITY(LAND BASED)	0.018	1.311
11	15	ASW(SEA BASED)	0.030	2.191
12	23	AIR SUPERIORITY(AIR BASED)	0.030	2.191
13	21	AIR DEFENSE(SHIP BASED)	0.017	1.254
14	10	STRATEGIC POWER	0.020	1.460
15	20	SPACE BASED WEAPON(AIR CNTRL)	0.019	1.384
16	13	SPECIAL OPERATIONS	0.010	0.730
17	29	ASAT(SPACE BASED)	0.013	0.939
18	18	MINE WARFARE	0.013	0.924
19	2	AMPHIBIOUS ASSAULT	0.010	0.713
20	28	ASAT(LAND BASED)	0.007	0.516
21	20	AIR DEFENSE(LAND BASED)	0.004	0.284
22	9	SPACE BASED WEAPON(LND CNTRL)	0.003	0.207
23	30	SPACE BASED WEAPON(SEA CNTRL)	0.002	0.148
24	27	ABM(SPACE BASED)	0.000	0.000
25	26	ABM(LAND BASED)	0.000	0.000
26	24	INTERCEPTOR AIRCRAFT	0.000	0.000
27	11	SLEM	0.000	0.000
28	7	ICBM	0.000	0.000
29	5	CIVIL DEFENSE	0.000	0.000
30	4	CBW	0.000	0.000

COMMODITY IMPORTANCE
(LOC 3)

COPALT

AIR INTERDICTION	5.44
ARMY GROUND	4.18
CAS	1.60
ICBM	0.00
STRATEGIC BOMBER	1.76
SLBM	0.00
ASW(SEA BASED)	1.27
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
ASAT(LAND BASED)	0.00

	33.99

TIN

AIR INTERDICTION	5.61
ARMY GROUND	1.78
CAS	1.77
STRATEGIC BOMBER	1.76
ASW(LAND BASED)	3.09
ASW(SEA BASED)	1.11
ATTACK SUBS	5.28
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.91
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00

	40.47

NICKEL

AIR INTERDICTION	5.33
ARMY GROUND	4.56
CAS	1.60
STRATEGIC BOMBER	1.76
ASW(SEA BASED)	1.71
ATTACK SUBS	5.23
CARRIER BATTLE GROUP	10.00
MINE WARFARE	0.92
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00

	40.30

FLUORSFAR ACID

AIR INTERDICTION	3.71
AMPHIBIOUS ASSAULT	0.71
ARMY GROUND	3.42
CAS	1.50
ICBM	0.00
STRATEGIC BOMBER	1.74
SLBM	0.00
ASW(LAND BASED)	3.09
ASW(SEA BASED)	1.67
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.29
AIR SUPERIORITY(LAND BASED)	2.73
AIR SUPERIORITY(SHIP BASED)	2.16
INTERCEPTOR AIRCRAFT	0.00
ABM(LAND BASED)	0.00
	38.50

PYRETHRUM

ARMY GROUND	2.47
CIVIL DEFENSE	0.00
ASW(SEA BASED)	0.14
CARRIER BATTLE GROUP	10.00
SURFACE COMBATANTS	4.29
	16.92

COMMODITY NORMALIZED IMPORTANCE

TIN	10.00	(40.47)
NICKEL	9.96	(40.30)
FLUORSFAR ACID	9.51	(38.50)
COBALT	8.40	(33.99)
PYRETHRUM	4.18	(16.92)

COBRA	CAS	67.4028
A-10	CAS	44.9000
COBRA	CAS	98.5000
F-4	AIR INTERDICTION	6.7400
F-16	AIR INTERDICTION	68.4168
	CAS	37.4460
ART. ACFT	CAS	3.3701
RADIO RLY	AIR INTERDICTION	3.0788
	CAS	2.5276
F-111	AIR INTERDICTION	123.1500
A-4	AIR INTERDICTION	36.9401
F-15	AIR INTERDICTION	54.7335
A-7	AIR INTERDICTION	42.2601
F-14	AIR INTERDICTION	41.0501
F-18	AIR INTERDICTION	68.4168
SH-3	ASW(SEA BASED)	6.0000
SH-2	ASW(SEA BASED)	15.1708
SH-60B	ASW(SEA BASED)	23.5990
S-3	ASW(SEA BASED)	34.6761
ATT. SUBS	ASW(SEA BASED)	24.0907
FRIGATES	ASW(SEA BASED)	14.4484
DESTROYERS	ASW(SEA BASED)	8.6690
M-48	ARMY GROUND	35.2006
M-60	ARMY GROUND	56.5724
M-1	ARMY GROUND	62.8582
M-551	ARMY GROUND	0.2095
M-901	ARMY GROUND	50.2866
M-2/M-3	ARMY GROUND	44.0000
M-113	ARMY GROUND	4.8890
MLRS	ARMY GROUND	18.8575
TOWED ART.	ARMY GROUND	25.1433
SELF-PROP.	ARMY GROUND	33.5244
PERSHING	ARMY GROUND	16.7622
GLCMs	ARMY GROUND	27.9370
INFANTRY	ARMY GROUND	6.9842
MORTERS	ARMY GROUND	34.0121
ROLES LNCH	ARMY GROUND	1.4667

NORMALIZED VALUES

F-111	10.0000
F-16	8.5962
F-4	8.5473
F-18	5.5556
A-10	5.4732
M-1	5.1042
M-60	4.5938
F-15	4.4444
M-901	4.0834
A-7	4.0000
COBRA	3.6488
M-2/M-3	3.5729
F-14	3.3333
A-6	3.0000
M-48	2.8583
S-3	2.8158
MORTERS	2.7789
SELF-PROP.	2.7272
GLCMs	2.2685
TOWED ART.	2.0417
ATT. SUBS	1.9554
SH-60B	1.9163
MLRS	1.5313
PERSHING	1.3611
SH-2	1.2319
FRIGATES	1.1732
DESTROYERS	0.7039
INFANTRY	0.5671
SH-3	0.4928
RADIO RLY	0.4502
M-113	0.3970
ART. ACFT	0.3717
ROLES LNCH	0.1191

TIN		
A-10	CAS	67 4028
COBRA	CAS	58 8111
F-4	AIR INTERDICTION	98 5202
	CAS	6 7403
F-16	AIR INTERDICTION	68 4118
	CAS	37 4410
ART. ACFT	CAS	3 3701
RADIO RLY	AIR INTERDICTION	3 0711
	CAS	2 5276
F-111	AIR INTERDICTION	113 1503
A-6	AIR INTERDICTION	41 5432
F-15	AIR INTERDICTION	54 7335
A-7	AIR INTERDICTION	48 2101
F-14	AIR INTERDICTION	46 1814
F-18	AIR INTERDICTION	76 9139
SH-3	ASW(SEA BASED)	5 2014
SH-2	ASW(SEA BASED)	12 0036
SH-60B	ASW(SEA BASED)	10 2177
S-3	ASW(SEA BASED)	34 6761
ATT. SUBS	ASW(SEA BASED)	14 4484
FRIGATES	ASW(SEA BASED)	14 4484
DESTROYERS	ASW(SEA BASED)	8 6470
M-48	ARMY GROUND	3 9112
M-60	ARMY GROUND	6 2858
M-1	ARMY GROUND	34 9112
M-551	ARMY GROUND	0 0418
M-901	ARMY GROUND	6 2858
M-2/M-3	ARMY GROUND	6 2818
M-113	ARMY GROUND	0 6984
MLRS	ARMY GROUND	9 4267
TOWED ART.	ARMY GROUND	4 1905
SELF-PROP.	ARMY GROUND	5 5874
PERSHING	ARMY GROUND	14 6669
GLCMs	ARMY GROUND	24 4449
INFANTRY	ARMY GROUND	55 8740
MORTERS	ARMY GROUND	4 8890
ROLES LNCH	ARMY GROUND	0 2095

NORMALIZED VALUES	
F-111	10.0000
F-16	8.5962
F-4	8.5473
F-18	6.2500
A-10	5.4732
COBRA	4.8651
INFANTRY	4.5371
F-15	4.4444
A-7	4.0000
F-14	3.7500
A-6	3.3750
M-1	2.8857
S-3	2.8158
GLCMs	1.9800
SH-60B	1.6425
PERSHING	1.1910
FRIGATES	1.1732
ATT. SUBS	1.1732
SH-2	1.0559
MLRS	0.7636
DESTROYERS	0.7039
M-2/M-3	0.5104
M-901	0.5104
M-60	0.5104
RADIO RLY	0.4552
SELF-PROP.	0.4537
SH-3	0.4224
MORTERS	0.3870
TOWED ART	0.3403
M-48	0.3172
ART. ACFT	0.2727
M-113	0.0917
ROLES LNCH	0.0120
M-551	0.0000

NICHEL		67.4028
A-10	CAS	44.9301
COBRA	CAS	72.8701
F-4	AIR INTERDICTION	5.0552
	CAS	68.4148
F-16	AIR INTERDICTION	37.4460
	CAS	2.2468
ART. ACFT	CAS	3.0768
RADIO BLAY	AIR INTERDICTION	2.5274
	CAS	123.1503
F-111	AIR INTERDICTION	36.9451
A-6	AIR INTERDICTION	54.7315
F-15	AIR INTERDICTION	49.2601
A-7	AIR INTERDICTION	46.1814
F-14	AIR INTERDICTION	76.9689
F-18	AIR INTERDICTION	6.9311
SH-3	ASW(SEA BASED)	17.3381
SH-2	ASW(SEA BASED)	26.9703
SH-60B	ASW(SEA BASED)	34.6761
S-3	ASW(SEA BASED)	43.3452
ATT SUBS	ASW(SEA BASED)	26.0071
FRIGATES	ASW(SEA BASED)	15.6042
DESTROYERS	ASW(SEA BASED)	39.1118
M-49	ARMY GROUND	62.8582
M-60	ARMY GROUND	69.8425
M-1	ARMY GROUND	0.6984
M-551	ARMY GROUND	44.0008
M-901	ARMY GROUND	50.2866
M-2/M-3	ARMY GROUND	4.8890
M-113	ARMY GROUND	18.8575
MLRS	ARMY GROUND	33.5244
TOWED ART.	ARMY GROUND	44.6992
SELF-PROP.	ARMY GROUND	16.7622
PERSHING	ARMY GROUND	20.9527
GLCMs	ARMY GROUND	34.9212
INFANTRY	ARMY GROUND	14.6669
MORTARS	ARMY GROUND	0.2095
ROLES LNCH	ARMY GROUND	

NORMALIZED VALUES	
10.0000	
8.5262	11
6.4105	6
6.2500	8
5.6713	0
5.4732	0
5.1042	5
4.4444	1/M-3
4.0834	
4.0000	4
3.7500	RA
3.4407	F-PROP.
3.6296	01
3.5729	SUBS
3.5197	3
3.1759	
3.0000	ANTRY
2.8957	
2.8158	ED ART.
2.7222	60B
2.1900	GATES
2.1118	MS
1.7014	3
1.5313	2
1.4079	SHING
1.3611	POYERS
1.2671	TERS
1.1910	3
0.5632	TO BLAY
0.4552	1
0.3970	ACFT
0.1874	51
0.0567	RS LNCH
0.0176	

FLUORSEAL ACID		
A-10	CAS	84 2536
COBRA	CAS	44 3071
F-4	AIR INTERDICTION	121 1511
	CAS	8 4254
F-16	AIR INTERDICTION	97 5210
	CAS	43 3071
AR1. ACFT	CAS	3 3701
RADIO RLY	AIR INTERDICTION	3 0788
	CAS	3 5076
F-111	AIR INTERDICTION	153 9138
A-6	AIR INTERDICTION	44 1814
F-15	AIR INTERDICTION	68 4188
A-7	AIR INTERDICTION	61 5751
F-14	AIR INTERDICTION	51 3014
F-18	AIR INTERDICTION	85 5210
SH-3	ASW(SEA BASED)	2 9372
SH-2	ASW(SEA BASED)	17 3381
SH-60B	ASW(SEA BASED)	33 7129
S-3	ASW(SEA BASED)	43 3451
ATT SUBS	ASW(SEA BASED)	28 9948
FRIGATES	ASW(SEA BASED)	20 2277
DESTROYERS	ASW(SEA BASED)	12 1367
M-48	ARMY GROUND	11 7335
M-60	ARMY GROUND	18 8570
M-1	ARMY GROUND	20 9527
M-551	ARMY GROUND	0 2013
M-901	ARMY GROUND	50 2866
M-2/M-3	ARMY GROUND	50 2866
M-113	ARMY GROUND	5 5874
MURB	ARMY GROUND	15 7143
TOWED ART	ARMY GROUND	20 9527
SELF-PROP	ARMY GROUND	27 9370
PERFISHING	ARMY GROUND	14 6639
GLCMS	ARMY GROUND	24 4449
INFANTRY	ARMY GROUND	55 8740
MORTERS	ARMY GROUND	24 4449
ROLES LNCH	ARMY GROUND	0 2095

NORMALIZED VALUES	
F-111	10.0000
F-16	8.5942
F-4	8.5473
F-18	5.5556
A-10	5.4732
F-15	4.4444
A-7	4.0000
INFANTRY	3.6296
F-14	3.3333
M-2/M-3	3.2667
M-901	3.2667
A-6	3.0000
COBRA	2.9191
S-3	2.8178
SH-60B	2.1900
ATT. SUBS	1.8772
SELF-PROP.	1.8143
MORTERS	1.5880
GLCMS	1.5880
TOWED ART.	1.3611
M-1	1.3611
FRIGATES	1.3140
M-60	1.2250
SH-2	1.1263
MLPS	1.0208
PERFISHING	0.9508
DESTROYERS	0.7884
M-48	0.7672
SH-3	0.4907
RADIO RLY	0.3682
M-113	0.2730
AR1. ACFT	0.2111
ROLES LNCH	0.0184
A-991	0.0113

HYPERTRON		
ATT. SUBS	ADW/SEA BARRD	14 4454
M-48	ARMY GROUND	17 3711
M-60	ARMY GROUND	44 0009
M-113	ARMY GROUND	4 9890
TOWED ART.	ARMY GROUND	21 3333
SELF-PROP.	ARMY GROUND	37 1111
INFANTRY	ARMY GROUND	69 8425
MORTERS	ARMY GROUND	34 2228

NORMALIZED VALUES

INFANTRY	10.0000
M-48	4.3000
SELF-PROP.	5.6000
MORTERS	4.9000
TOWED ART.	4.2000
M-60	3.9200
ATT. SUBS	2.0637
M-113	0.7000

ALL COMMODITIES

A-10	CAS	2.8141
ACB-4	CAS	1.1410
F-4	AIR INTERDICTION	3.9408
	CAS	0.2496
F-16	AIR INTERDICTION	2.9177
	CAS	1.3419
ART. ACFT	CAS	0.1234
RADIO BLAY	AIR INTERDICTION	0.1232
	CAS	0.1011
F-111	AIR INTERDICTION	5.123
A-6	AIR INTERDICTION	1.6143
F-15	AIR INTERDICTION	1.3140
A-7	AIR INTERDICTION	2.8130
F-14	AIR INTERDICTION	1.8473
F-13	AIR INTERDICTION	3.0731
SH-3	ASW(SEA BASED)	0.2514
SH-1	ASW(SEA BASED)	0.4255
SH-60B	ASW(SEA BASED)	1.0411
SH-3	ASW(SEA BASED)	1.4737
ATT. SUBS	ASW(SEA BASED)	1.2522
FRIGATES	ASW(SEA BASED)	0.7513
DESTROYERS	ASW(SEA BASED)	0.4509
M-48	ARMY GROUND	1.1734
M-60	ARMY GROUND	1.8812
M-1	ARMY GROUND	1.8157
M-551	ARMY GROUND	0.0119
M-201	ARMY GROUND	1.5086
M-1AM-3	ARMY GROUND	1.5016
M-113	ARMY GROUND	0.2095
MLRS	ARMY GROUND	0.6296
TOWED ART.	ARMY GROUND	1.1314
SELF-PROP.	ARMY GROUND	1.5084
PERSHING	ARMY GROUND	0.6286
GLCMs	ARMY GROUND	0.9772
INFANTRY	ARMY GROUND	2.2350
MORTARS	ARMY GROUND	1.1245
ROLES LNCH	ARMY GROUND	0.0210

NORMALIZED VALUES	
F-111	10.0000
F-16	1.9442
F-4	0.0445
F-15	5.8374
A-10	5.4732
F-14	4.4444
INFANTRY	4.2702
A-7	4.0000
COBRA	0.7204
M-1	0.6030
M-60	0.6030
F-14	0.5274
A-6	0.0882
M-2/M-3	2.8824
M-201	2.8824
SELF-PROP.	2.8824
S-3	2.8158
ATT. SUBS	2.8925
M-48	2.2418
TOWED ART.	2.1419
MORTARS	2.1434
SH-60B	1.9733
GLCMs	1.8632
FRIGATES	1.4335
PERSHING	1.2010
MLRS	1.2010
SH-2	1.2008
DESTROYERS	0.9643
SH-3	0.4303
RADIO BLAY	0.4233
F-113	0.4010
ART. ACFT	0.2711
ROLES LNCH	0.0210
F-111	0.0000

CRITICALITY OF SHORTAGE
ALL FEES
(LOC 3)

COMMODITY	GOAL (UNITS)	STOCK FILE (UNITS)	SHORT FALL (%)	TRANS- LATED	FE/ COMMODITY IMPORT.	CRITIC- ALITY	NORMALITY FE SHORT- AGE
COBALT	85.4	43.3	-43.7	402.5	8.4	3378.9	7.5
TIN	42.0	150.5	353.8	0.0	10.0	0.0	0.0
NICKEL	200.0	32.2	-83.9	437.7	10.0	4358.1	10.0
FLUORENOL ACID	1400.0	800.0	-43.1	399.8	9.5	3703.3	8.5
HYDRETHUM	500.0	0.0	-100.0	453.8	4.2	1997.6	4.2

COMPOSITE IMPORTANCE
(LOC 3)

COBALT

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/01	% (1/01)
FINLAND	1350.	7.71	1.77	0.560	0.477
INDONESIA	450.	2.57	2.05	0.437	1.20
ESTERWANA	250.	1.43	1.76	0.569	0.81
SOUTH AFRICA	150.	0.83	2.31	0.432	0.23
ZAIRE	10500.	71.43	1.71	0.580	41.47
PHILIPPINES	50.	0.28	0.81	1.216	0.37
AUSTRALIA	400.	2.29	0.82	1.216	2.77
NEW CALEDONIA	250.	1.43	0.82	1.216	1.77
CANADA	1100.	6.29	2.61	0.381	2.40
U.S.	1000.	5.71	2.31	0.432	2.47
TOTAL	17500.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

TIN

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/01	% (1/01)
AUSTRALIA	100.	0.15	0.82	1.216	0.180
FINLAND	16100.	23.82	2.31	0.432	10.24
INDONESIA	5900.	8.73	0.82	1.216	10.61
U.S.	5800.	8.58	0.82	1.216	10.43
BO. IVIA	100.	0.15	1.76	0.569	0.084
BRAZIL	10300.	15.24	0.90	1.117	17.014
PERU	2400.	3.55	0.90	1.117	3.964
MA. AYSIA	3000.	4.44	2.33	0.429	1.90
	23900.	35.36	0.82	1.216	42.98
TOTAL	67600.	100.00			

COMPOSITE IMPORTANCE
(LOC 3)

NICKEL

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	%(1/CI)
FINLAND	1000	0.33	1.72	0.580	0.181
SOUTH AFRICA	5000	1.64	2.31	0.432	0.74
PHILIPPINES	5000	1.64	0.82	1.216	1.557
AUSTRALIA	20000	8.21	0.82	1.216	1.557
CANADA	150000	47.28	2.31	0.383	11.377
U.S.	89000	28.91	2.31	0.432	12.501
GREECE	600	0.20	1.76	0.569	0.101
NETHERLANDS	200	0.07	1.76	0.569	0.037
FR.	100	0.03	1.76	0.569	0.019
YUGOSLAVIA	500	0.16	1.76	0.569	0.034
USSR	5000	1.64	0.82	1.160	1.875
DEM. REP. G.	15000	4.93	1.38	0.727	3.541
GUATEMALA	4000	1.31	1.38	0.727	3.957
INDONESIA	5000	1.64	0.82	1.216	1.557

TOTAL: 304400 100.00

COMPOSITE IMPORTANCE
(LOC 3)

FLUORENE ACID

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	%(1/CI)
SOUTH AFRICA	150	22.31	2.31	0.432	5.601
U.S.	70	8.70	2.31	0.432	3.761
ITALY	65	8.07	1.76	0.569	4.597
SPAIN	100	12.42	1.76	0.569	7.073
SOUTH AFRICA	25	3.11	1.76	0.569	1.763
THAILAND	15	1.86	0.82	1.216	2.245
MEXICO	350	43.43	2.31	0.432	18.801

TOTAL: 665 100.00

COMPOSITE IMPORTANCE
(LOC 3)

PYRETHRUM

SOURCE	AMOUNT SUPPLIED	% OF TOTAL	COMPOSITE IMPORTANCE	1/CI	%(1/CI)
SOUTH AFRICA	2000	1.01	2.31	0.432	0.433
AUSTRALIA	1500	0.76	0.82	1.216	0.923
U.S.	11000	5.57	1.76	0.569	3.171
KENYA	80000	40.51	1.76	0.569	23.013
RWANDA	25000	12.66	1.76	0.569	7.207
TANZANIA	78000	39.47	1.76	0.569	22.487

TOTAL: 197500 100.00

SOURCE IMPORTANCE
(LOC 2)

SOURCE	W11011 COMP IMP	REVERSE CRITICALITY	TOTAL	NORMALIZED TO 100
SECRET				
FINLAND	4 477	7 76	34 72	10 81
MOROCCO	1 252	7 76	9 71	3 01
BOTSWANA	0 610	7 76	6 91	1 96
SOUTH AFRICA	0 371	7 76	2 87	0 86
SAIRE	41 451	7 76	311 48	111 11
PHILIPPINES	0 347	7 76	2 69	0 84
AUSTRALIA	2 777	7 76	21 55	6 70
NEW CALEDONIA	1 737	7 76	13 47	4 18
CANADA	2 418	7 76	18 47	5 81
U S	2 471	7 76	18 16	5 82
T				
AUSTRALIA	0 180	0 00	0 00	0 01
U S	10 299	0 00	0 00	0 00
THAILAND	10 611	0 00	0 00	0 00
INDONESIA	10 471	0 00	0 00	0 00
UK	0 084	0 00	0 00	0 01
BOLIVIA	17 014	0 00	0 00	0 01
BRAZIL	3 864	0 00	0 00	0 00
FRG	1 901	0 00	0 00	0 01
MALAYSIA	42 833	0 00	0 00	0 00
N				
FINLAND	0 191	10 00	1 91	0 58
SOUTH AFRICA	0 710	10 00	7 10	2 21
PHILIPPINES	1 897	10 00	19 97	6 21
AUSTRALIA	9 985	10 00	99 85	31 08
CANADA	18 877	10 00	188 77	58 72
U S	12 501	10 00	125 01	38 88
GREECE	0 112	10 00	1 12	0 35
NETHERLANDS	0 037	10 00	0 37	0 12
FRG	0 019	10 00	0 19	0 06
YUGOSLAVIA	0 094	10 00	0 94	0 29
USSR	1 905	10 00	19 05	5 92
DOM REPUB	3 582	10 00	35 82	11 14
GUATAMALA	0 955	10 00	9 55	2 87
INDONESIA	1 997	10 00	19 97	6 21
F				
FLUORSPAR ACID				
SOUTH AFRICA	9 649	8 51	82 28	25 59
U S	3 760	8 51	32 00	9 90
ITALY	4 597	8 51	39 12	12 17
SPAIN	7 073	8 51	60 19	18 72
EAST AFRICA	1 768	8 51	15 05	4 68
THAILAND	2 265	8 51	19 28	6 00
MEXICO	18 801	8 51	159 98	49 77
P				
PETHEUM				
SOUTH AFRICA	0 438	4 35	1 91	0 58
AUSTRALIA	0 923	4 35	4 02	1 25
U S	3 171	4 35	13 81	4 30
ITALY	23 063	4 35	100 42	31 24
FRG	7 207	4 35	31 38	9 76
NETHERLANDS	22 487	4 35	97 91	30 48

SOURCE IMPORTANCE
RANKED BY SOURCE
(LOC 3)

#	SOURCE	COMMODITY	VALUE
1	ZAIRE	COBALT	10.00
2	CANADA	NICKEL	7.00
3	MEXICO	FLUORSPAR ACID	5.00
4	U.S.	NICKEL	4.00
5	KENYA	PYRETHRUM	3.00
6	AUSTRALIA	NICKEL	2.00
7	TANZANIA	PYRETHRUM	2.00
8	SOUTH AFRICA	FLUORSPAR ACID	2.00
9	SPAIN	FLUORSPAR ACID	1.00
10	ITALY	FLUORSPAR ACID	1.00
11	DOM. REPUB	NICKEL	1.00
12	FINLAND	COBALT	1.00
13	U.S.	FLUORSPAR ACID	1.00
14	RWANDA	PYRETHRUM	1.00
15	AUSTRALIA	COBALT	1.00
16	INDONESIA	NICKEL	1.00
17	PHILIPPINES	NICKEL	1.00
18	THAILAND	FLUORSPAR ACID	1.00
19	U.S.	COBALT	1.00
20	USSR	NICKEL	1.00
21	CANADA	COBALT	1.00
22	EAST AFRICA	FLUORSPAR ACID	1.00
23	UK	PYRETHRUM	1.00
24	NEW CALEDONIA	COBALT	1.00
25	MOROCCO	COBALT	1.00
26	GUATEMALA	NICKEL	1.00
27	SOUTH AFRICA	NICKEL	1.00
28	BOTSWANNA	COBALT	1.00
29	AUSTRALIA	PYRETHRUM	1.00
30	SOUTH AFRICA	COBALT	1.00
31	PHILIPPINES	COBALT	1.00
32	SOUTH AFRICA	PYRETHRUM	1.00
33	FINLAND	NICKEL	1.00
34	GREECE	NICKEL	1.00
35	YUGOSLAVIA	NICKEL	1.00
36	NETHERLANDS	NICKEL	1.00
37	FRG	NICKEL	1.00
38	MALAYSIA	TIN	1.00
39	PRC	TIN	1.00
40	BRAZIL	TIN	1.00
41	BOLIVIA	TIN	1.00
42	UK	TIN	1.00
43	INDONESIA	TIN	1.00
44	THAILAND	TIN	1.00
45	U.S.	TIN	1.00
46	AUSTRALIA	TIN	1.00

END

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