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81 A LUF,K=J,K/LP,K
82 A LUF0,K=SHOOT(LUF,K,LUFDT)
83 C LUFDT=2
84 A CUF,K=TABUL(CUPT,LUF0,K,1,11,2)
85 H CUF=1
86 T CUPT=1/.9/.7/.3/.1/.1
87 NOTE
88 NOTE AGRICULTURAL SECTOR
89 NOTE
90 NOTE LOOP 1: FOOD FROM INVESTMENT IN LAND DEVELOPMENT
91 NOTE
92 A LFC,K=AL,K/PALT
93 C PALT=3.2E5
94 L AL,K=AL,K*(DT) (LDR,JK=LDR,JK-LRUI,JK)
95 H AL=AL1
96 L AL=AL2
97 C PAL,K=PAL,K*(DT) (-LDR,JK)
98 H PAL=PAL1
99 C PAL1=2.3E5
100 F,K=LY,K*AL,K*LFU*(1-PL)
101 C LFU=-7
102 C PL=-1
103 A FFC,K=FC,K/POP,K
104 A IFPC,K=CLIP(IFPC,K,IFPC1,K,TIME,K,PYEAR)
105 A IFPC1,K=TABUL(IFPC1,K,IOPC,K,0,1600,200)
106 T IFPC1,K=230/480/690/850/970/1070/1150/1210/1250
107 A IFPC2,K=TABUL(IFPC2,K,IOPC,K,0,1600,200)
108 T IFPC2,K=230/480/690/850/970/1070/1150/1210/1250
109 L IOPC=IO1,K*FIOOA,K
110 A FIOOA,K=CLIP(FIOOA2,K,FIOOA1,K,TIME,K,PYEAR)
111 A FIOOA1,K=TABUL(FIOOA1,K,FCR,K/IFPC,K,0,2,5,.5)
112 T FIOOA1,K=4/.2/.1/.025/0/0
113 A FIOOA2,K=TABUL(FIOOA2,K,FCR,K/IFPC,K,0,2,5,.5)
114 T FIOOA2,K=4/.2/.1/.025/0/0
115 R LDR,IL=DAI,K*FALD,K/FCR,K
116 A DCMH,K=TABUL(DCMH,K,PAL,K/PALT,0,1,1)
117 T DCMH,K=1E5/7400/5200/5800/2400/1500/300/150/75/50
118 NOTE
119 NOTE LOOP 2: FOOD FROM INVESTMENT IN AGRICULTURAL INPUTS
120 NOTE
121 A CAI,K=TAI,K*(1-FALD,K)
122 A AI,K=SHOOT(CAI,K,ALAI,K)
123 H AI=5E9
124 A ALAI,K=CLIP(ALAI2,K,ALAI1,K,TIME,K,PYEAR)
125 C ALAI1=2
126 C ALAI2=2
127 A AIPIH,K=AI,K*(1-PALM,K)/AL,K
128 T LYMC,K=TABUL(LYMC,K,ALP,K,0,1000,40)
129 T LYMC1,K=1/3/8/4/4/4/5/5/6/6/6/6/6/7/7/7/4
130 X 7/6/7/8/8/8/2/8/4/8/6/8/8/9/9/2/9/4/9/6/9/8/10
131 A LYV,K=LYMT,K*LYMC,K*LYMC,K
132 A LYV,K=CLIP(LYV2,K,LYV1,K,TIME,K,PYEAR)
133 C LYV1=1
134 C LYV2=1
135 A LYVAP,K=CLIP(LYVAP2,K,LYVAP1,K,TIME,K,PYEAR)
136 A LYVAP1,K=TABUL(LYVAP1,K,IOV,K/1070,0,30,10)
137 T LYVAP1,K=1/1/.7/.4
138 A LYVAP2,K=TABUL(LYVAP2,K,IOV,K/1070,0,30,10)
139 T LYVAP2,K=1/1/.7/.4
140 C IOV=7.9E11
141 NOTE
142 NOTE LOOPS 1 & 2: THE INVESTMENT ALLOCATION DECISION
143 NOTE
144 A FIALD,K=TABUL(FIALD,K,MPID,K/MPAI,K,0,2,.25)
145 T FIALD,K=0/.05/.15/.30/.50/.70/.85/.95/1
146 A MPID,K=LY,K/R(DCMH,K*SD)
147 C SD=67
148 A MPAI,K=ALAI,K*LY,K*LYMC,K/LYV,K
149 A LYMC,K=TABUL(LYMC,K,ALP,K,0,1000,40)
150 T LYMC1,K=075/.01/.015/.017/.005/.008/.007/.006/
151 X .005/.005/.005/.005/.005/.005/.005/.005
152 NOTE
153 NOTE LOOP 3: LAND EROSION AND URBAN-INDUSTRIAL USE
154 NOTE
155 A ALL,K=ALL,K*LMY,K
156 C ALL=6000
157 A LLMY,K=CLIP(LLMY2,K,LLMY1,K,TIME,K,PYEAR)
158 A LLMY1,K=TABUL(LLMY1,K,LY,K/LLP,K,0,9,1)
159 T LLMY1,K=2/2/.63/.16/.055/.04/.025/.015/.01
160 A LLMY2,K=TABUL(LLMY2,K,LY,K/LLP,K,0,9,1)

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T LLMY2,K=1.2/1/.63/.16/.055/.04/.025/.015/.01
R LDR,K=AL,K/ALL,K
116 A ULPC,K=TABUL(ULPC,K,IOPC,K,0,1600,200)
117 T ULPC1,K=0.05/.008/.015/.025/.04/.055/.07/.08/.09
118 A ULPC,K=ULPC,K*POP,K
119 R ULPC,K=MAX(0,(ULPC,K-ULC,K)/ULC,K)
120 C ULPC1=10
121 L ULC,K=ULC,K*(DT) (LRUI,JK)
122 H ULC=UL1
123 C ULC1=8.7E6
124 NOTE
125 NOTE LOOP 4: LAND FERTILITY REGENERATION
126 NOTE
127 A LFERT,K=LFERT,K*(DT) (LFR,JK=LFD,JK)
128 H LFERT=LFERT1
129 C LFERT1=600
130 A LFR,K=TABUL(LFERT,K,POP,K,0,30,10)
131 T LFR=60/.1/.3/.5
132 R LFD,K=LFERT,K*LFR,K
133 NOTE
134 NOTE LOOP 5: LAND FERTILITY REGENERATION
135 NOTE
136 A LFR,K=(LFR-LFERT,K)/LFR,K
137 C LFR=600
138 A LFRT,K=TABUL(LFRT,K,PAJ,K,0,10,02)
139 T LFRT=20/13/8/4/2/2
140 NOTE
141 NOTE LOOP 6: DISCONTINUING LAND MAINTENANCE
142 NOTE
143 A PALM,K=TABUL(PALM,K,PPR,K,0,4,1)
144 T PALM=0/.04/.07/.09/.1
145 A FR,K=PPR,K/SPFC
146 C SPFC=210
147 A PFR,K=SHOOT(FR,K,PPSD)
148 N PFR=1
149 C PPSD=2
150 NOTE
151 NOTE NONRENEWABLE RESOURCE SECTOR
152 NOTE
153 L NR,K=NR,K*(DT) (-NRUR,JK)
154 H NR=NR1
155 C NR1=1E12
156 R NRUR,K=CLIP(NRUR,K,PCRM,K) (NRUF,K)
157 A NRUF,K=CLIP(NRUF2,K,NRUF1,K,TIME,K,PYEAR)
158 C NRUF1=1
159 T NRUF2=1
160 A PCRM,K=TABUL(PCRM,K,IOPC,K,0,1600,200)
161 T PCRM1,K=0.85/3/6/4/4/5/4/6/2/6/8/7/7
162 R NRUR,K=NR,K/0/01
163 A PCAOR,K=CLIP(PCAOR2,K,PCAOR1,K,TIME,K,PYEAR)
164 A PCAOR1,K=TABUL(PCAOR1,K,NR,K,0,1,1)
165 T PCAOR1,K=1/9/7/4/3/1/5/05/05/05/05/05/05/05
166 A PCAOR2,K=TABUL(PCAOR2,K,NR,K,0,1,1)
167 T PCAOR2,K=1/9/7/5/2/1/5/05/05/05/05/05/05/05
168 NOTE
169 NOTE PERSISTENT POLLUTION SECTOR
170 NOTE
171 R PPGC,K=CLIP(PPGC,K,PPGAG,K)*(PPCP,K)
172 A PPGC,K=CLIP(PPGP2,K,PPGP1,K,TIME,K,PYEAR)
173 C PPGP1=1
174 C PPGP2=1
175 A PPGIO,K=PCRM,K*POP,K*FRP,K*INFP*INTI
176 C FRP=0.02
177 A INFP=1
178 T INFP1=10
179 A PPGAG,K=AIPIH,K*AL,K*FPIH,K*MTI
180 C FPIH=501
181 A ANI=1
182 R PPAPR,K=DELAY3(PPGR,JK,PPGD)
183 C PPGD=20
184 A PPOL,K=PPOL,K*(DT) (PPAPR,JK=PPASR,JK)
185 N PPOL=2.5E7
186 A PPOLX,K=PPOL,K/PPOL70
187 C PPOL70=1.3E8
188 R PPASR,K=PPOL,K/(AHL,K*1.4)
189 A AHL,K=TABUL(AHL,K,PPOLX,K,1,1001,250)
190 T AHL=1/11/21/31/41
191 A AHL,K=AHL70*AHL,K
192 C AHL70=1.5
193 NOTE

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