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REPORT NUMBER

THE EARTH RESOURCES SKYLARK ROCKET
A COMMERCIAL EVALUATION
ANNEXURE
SUPPLEMENT TO APPENDIX I

HUNTING SURVEYS AND CONSULTANTS LIMITED
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ANNEXURE

SUPPLEMENT TO APPENDIX I

\- REPORT SUBMITTED TO HUNTING SURVEYS & CONSULTANTS LTD. BY THE ECONOMIST INTELLIGENCE UNIT -

THE SPECIFICATION AND MARKETABILITY OF AN EARTH RESOURCES INFORMATION SYSTEM USING SOUNDING ROCKETS.

ANNEXURE

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SECTION I

TABLES RELATING TO MAIN VOLUME APPENDIX I

CONTENTS

TABLE IA Earth Resources Information Need Categories

Agricultural Production	Potential Skylark application	Periodicity[a]	Order of min. resolution requirement[b] (metres)
a. Crop acreage/type	Yes	Medium/Low	20- 50
b. Crop/plant condition	Yes	Medium/Low	20- 50
c. Range of quality, disease incidence	Yes	Medium/Low	20- 50
d. Crop maturity	Yes	Medium/Low	20- 50
e. Soil type and quality	Yes	Medium/Low	30- 50
f. Ground water indicators	Yes	Medium/Low	30- 50
g. Estimated run-off	Perhaps	High/Medium	5- 10
h. Topography and drainage patterns	Yes	High/Medium	10- 50
i. Percentage of diseased animals	No	Medium/Low	2
j. Rain, snow effects	Perhaps	High	1,000- 5,000
k. Storm prediction	No	High	1,000-10,000
l. Weather conditions	Perhaps	High	1,000- 5,000
m. Location of transport networks and storage depots	Yes	Medium/Low	10- 50
n. Livestock count	No	Medium/Low	0.5
Forestry Production			
a. Crown diameter and tree count	No	Medium/Low	5- 10
b. Acreage/species	Yes	Medium/Low	30- 100
c. Extent of disease	Yes	Medium	30- 100
d. Extent of blow-down	Perhaps	High/Medium	20- 50
e. Burnt-over area	Yes	High/Medium	100- 500
f. Soil type and moisture	Yes	Medium/Low	10- 50
g. Topography and transport location	Yes	Medium/Low	10- 50

/continued

Earth Resources Information Need Categories (Continued)

Fisheries and Wildlife Management	Potential Skylark application	Periodicity[a]	Order of resolution requirement[b] (metres)
a. Plankton location and concentration	Perhaps	High/Medium	100-10,000
b. Nutrient concentrations	Yes	Medium	100-10,000
c. Ocean water temperature	No	Medium/Low	100-20,000
d. Current patterns	Yes	Medium	1,000-10,000
e. *Location of sea and inland ice*	Yes	High/Medium	100- 1,000
f. Pollution effects	Yes	High/Medium	10- 1,000
Mineral Resources Production			
a. Basement exposures	Yes	Low	20- 500
b. Inactive/active plate boundaries	Yes	Medium	1,000- 5,000
c. Intrusions	Yes	Low	20- 500
d. Fault zones and other structures	Yes	Low	20- 500
e. Active/extinct hydrothermal activities	No	High/Medium	100
f. Erosion/deposition patterns	Perhaps	High/Medium/ Low	50- 500
g. Placers	Yes	Low	20- 500
h. Stratigraphic/topographic anomalies	Yes	Low	20- 500
i. Rock types and associations	Yes	Low	10- 100
j. Topography	Perhaps	Low	10- 70
k. Distance from harbours/ processing centres	Yes	Low	-
l. Potential energy sources	No	Low	-
m. Geothermal resources	No	Low	-
Water Resources Management			
a. Vegetation cover and soil condition	Yes	Medium	20- 50
b. Drainage patterns	Yes	High/Medium	20- 50
c. Water quality	Yes	High/Medium	20- 1,000
d. Anticipated run-off	Yes	Medium	50- 1,000
e. Glacial flow	No	High	20- 100
f. River course maps	Yes	Medium/Low	20- 50
g. Bank conditions	Yes	High/Medium	10- 50
h. Location of lakes	Yes	Medium/Low	20- 50
i. Water depth	Yes	Medium	20- 50
j. River ice conditions	No	High	10- 50
k. Flow rates	No	High	5- 10
l. Atmospheric temperature profile	No	High	5,000-10,000
m. Weather system location	No	High	5,000-10,000
n. Classification of storm centres	No	High	1,000- 5,000
o. Water vapour/humidity profile	No	High	5,000-10,000
p. Motion of weather systems	No	High	10,000-20,000
q. Extent and type of cloud-cover	No	High	5 000-10,000
r. Cloud top temperatures	No	High	1,000- 5,000

/continued

Earth Resources Information Need Categories (Continued)

Environmental Management	Potential Skylark application	Periodicity[a]	Order of resolution requirement[b] (metres)
a. Water quality	Yes	Medium/Low	50- 5,000
b. Air quality	No	High	1,000- 5,000
c. Location and area of strip mines	Yes	Low	50- 100
d. Environmental impact	Yes	Low	20- 50
e. Distribution and quantity of solid waste	Yes	Low	20- 50
f. Wildlife migration patterns	No	High/Medium	-
g. Area and boundaries of wetlands	Yes	Medium	30- 100
h. Extent and severity of coastal, river and soil erosion	Yes	Medium/Low	10- 50
i. Vegetation inventories	Yes	Medium/Low	20- 50
j. Area and quality of habitats	Yes	Low	20- 50
k. Bounds on environmental complexes	Yes	Low	50- 100
l. Extent and effectiveness of restoration projects	Yes	Medium/Low	10- 50
m. Variability of natural environment	Yes	Low	100+
n. Degradation surveys	Yes	High/Medium/Low	20- 50
o. Oil slick detection and dispersion monitoring	No	High	20- 100
Land Use Planning			
a. Maps of urban areas	No	Low	5- 10
b. Location of existing land-use features: urban structures, recreational, transport networks and capacity	Perhaps	Low	5- 100
c. Population density contour maps	Yes	Low	20- 50
d. Area and quality of rural landscape	Yes	Low	30- 100
e. Location of infrastructure, sewage, water and energy distribution, communications	Yes	Low	10- 50
f. Topography	Yes	Low	10- 50
g. Surface water	Yes	High/Medium/Low	20- 50
h. Ground water and run-off	Yes	High/Medium	10- 50
i. Geological barriers	Yes	Low	50- 100
j. Man-made structure location	No	Low	5- 20

/continued

Earth Resources Information Need Categories (Continued)

	Potential Skylark application	Periodicity[a]	Order of resolution requirement[b] (metres)
Engineering Services			
a. Ocean salinity	Yes	Low	10,000-20,000
b. Maps	Perhaps	Low	0.1- 1,000
c. Location of existing land-use features	Yes	Low	20- 50
d. Flow rate	No	High	-
e. Location of infrastructure	Yes	Low	10- 50
f. Topography, surface water	Yes	Medium/Low	20- 50
g. Ground water and run-off	Yes	High/Medium	10- 50
h. Man-made structures	No	Low	5- 20
i. Weather conditions	No	High	1,000- 5,000
Disaster Warning and Relief			
a. Location, area and boundary of flood plains	No	High	50- 100
b. Location and activity of volcanoes and faults	No	High/Medium	30- 70
c. Stability of slopes	Perhaps	High/Medium	1- 20
d. Location and motion of storm centres	No	High	5,000-10,000
e. Facilities near geological hazards	Perhaps	Low	20- 50
f. Survey of flood damage	Perhaps	Low	10- 50
g. Distribution capacity for relief operations	Perhaps	Low	1- 50
h. Long-term effects of drought	Yes	Medium	30- 100
Mapping Services			
a. Location and dimensions of topographic features	No	Low	5- 20
b. Location and dimensions of urban areas	No	Low	10- 20
c. Transportation networks	No	Low	5- 20
d. Location and area of archaeological sites	No	Low	5- 20
e. Global climatic data	No	High	10- 50
f. Population density and socio-economic distribution	Perhaps	Low	20- 100
g. Monitor land formation process	Perhaps	Low	5,000- 1,000
h. Monitor change in land-use	Yes	Medium/Low	20- 100
i. Monitor patterns of seasonal change	Yes	Medium	20- 100
j. Weather conditions	No	High	1,000- 5,000
k. Thematic mapping	Yes	Medium	20- 50

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Earth Resources Information Need Categories (Continued)

Public and Animal Health	Potential Skylark application	Periodicity[a]	Order of resolution requirement[b] (metres)
a. Location and extent of carrier breeding grounds	Yes	Medium	10- 50
b. Time when conditions are optimal for control	No	High	1,000- 5,000
c. Urban condition, housing, population density, location of health centres	Perhaps	Low	10- 50

Note: Although certain information categories in different management groups are identical or similar, they are included because their management decision implications may be different e.g. 'drainage patterns' are of interest to Agricultural Production in that they help indicate irrigation project location, whereas in Water Resources Management they may have implications for water storage in reservoirs.

a High = less than one month; Medium = one month to one year; Low = more than one year. b This is a minimum desirable range.

Sources: EIU, Reading University, Earth Satellite Corporation, IBM Sensor Definition Study, NASA (Report of the Interagency Ad Hoc Study Group on the Earth Resources Survey Programme).

TABLE IB Countries Undertaking Crop Surveys 1974

Country	Survey classifications: Acreage forecast	Yield forecast	Statistical sampling
EUROPE			
Austria	A	B	-
Belgium	A	B	-
Denmark	A	A	S
Finland	A	A	S
West Germany	A	B	S
France	A	D	-
Greece	B	B	-
Ireland	A	A	S
Italy	B	B	S
Luxemburg	A	B	-
Netherlands	A	B	S
Norway	A	B	S
Portugal	C	C	-
Spain	A	B	-
Sweden	A	B	S
Switzerland	A	B	-
United Kingdom	A	C	S
Yugoslavia	B	B	S
NORTH-CENTRAL AMERICA			
Canada	A	A	S
Costa Rica	A	A	S
Dominican Republic	A	A	-
El Salvador	B	B	-
Guadeloupe	B	B	-
Guatemala	A	A	-
Martinique	B	B	-
Mexico	B	B	S
Panama	A	A	S
Puerto Rico	A	A	S
USA	A	A	S
SOUTH AMERICA			
Argentine	A	A	S
Brazil	C	C	S
Chile	A	D	-
Colombia	A	A	S
Ecuador	A	A	-
French Guiana	-	-	-
Paraguay	A	C	S
Peru	D	D	-
Surinam	A	A	-
Uruguay	A	A	S
Venezuela	B	B	-

(continued)

Countries Undertaking Crop Surveys 1974 (continued)

Country	Survey classification: Acreage forecast	Yield forecast	Statistical sampling
ASIA			
Burma	A	A	-
Ceylon	A	B	S
Cyprus	A	A	-
Malaysia	A	A	S
India	A	B	-
Indonesia	B	A	-
Iran	D	D	-
Iraq	C	C	-
Israel	B	B	S
Japan	A	B	S
Jordan	C	C	-
Lebanon	C	C	-
Pakistan	C	C	-
Philippines	B	B	-
Syria	C	C	-
Thailand	B	B	-
Turkey	B	B	S
AFRICA			
Algeria	B	B	-
Sudan	B	B	-
Lesotho	D	D	S
Botswana	C	C	-
Zaire	B	B	-
Egypt	A	A	-
Cameroun	A	A	-
Morocco	C	C	-
Somalia	D	D	-
Togo	A	A	-
Dahomey	A	A	-
Guinea	A	A	-
Ivory Coast	A	A	-
Mali	A	A	-
Mauritania	A	A	-
Niger	A	A	-
Senegal	A	A	-
Upper Volta	A	A	-
Ghana	A	A	S
Kenya	A	A	-
Madagascar	C	C	-
Nigeria	D	D	S

(continued)

Countries Undertaking Crop Surveys 1974 (continued)

Country	Survey classification: Acreage forecast	Yield forecast	Statistical sampling
AFRICA (continued)			
Zambia	A	A	-
Malawi	A	A	-
Rhodesia	A	C	-
Spanish Sahara	A	A	-
Swaziland	A	A	-
Tanzania	D	D	S
Tunisia	A	A	-
South Africa	A	A	-
Uganda	C	C	S
OCEANIA			
Australia	A	A	S
Fiji	A	A	-
Hawaii	A	A	-
New Caledonia	A	A	-
New Zealand	A	A	S

Explanation of symbols: A Sampling at farm level. B Sampling at commune level. C Sampling at district level. D Sampling at province level. S Stratified sampling.

Source: Ref. 9.

TABLE IC. Information and Data Costs and Cloud Zones for Individual Countries Assuming Total Skylark Coverage

Country	Land area (km^2)	% cultivated land area	% forest area	No. of firings for total coverage[a]	Information cost per km (£)[b]	Data cost per km (£)[c]	Approximate density 1971 (persons per km^2)	Cloud zone[d]
EUROPE								
Austria	83,849	21	38	1	2.73	1.29	89	11
Belgium	30,513	31	20	1	7.51	3.58	319	11
Denmark	43,031	63	9	1	5.33	2.53	115	11
Finland	337,032	8	66	2	1.36	0.64	14	11/14
France	551,601	38	22	2	0.83	0.40	94	11
West Germany	248,542	33	29	2	1.84	0.88	239	11
Greece	131,944	29	20	2	3.47	1.64	68	18
Ireland	68,893	18	3	1	3.33	1.57	42	11
Italy	301,224	51	20	2	1.52	0.72	180	11/18
Luxemburg	8,800	29	33	1	26.04	12.39	132	11
Netherlands	40,893	29	9	1	5.61	2.66	323	11
Norway	323,885	3	22	3	2.12	1.00	12	11/14
Portugal	91,641	49	28	1	2.50	1.19	94	18
Spain	504,748	41	23	2	0.91	0.44	68	18/11
Sweden	449,793	7	50	3	1.53	0.72	18	11/14
Switzerland	41,288	10	24	1	5.55	2.63	154	11
United Kingdom	229,827	31	7	2	1.99	0.95	228	11/14
Yugoslavia	255,804	33	34	2	1.79	0.85	80	11/18
NORTH & CENTRAL AMERICA								
Canada	9,976,169	4	44	35	0.80	0.38	2	9/11/10/15
Costa Rica	50,900	12	59	1	4.50	2.14	35	16
Dominican Republic	48,442	22	46	1	4.73	2.25	86	4
El Salvador	21,393	30	24	1	10.71	5.09	166	16
Guatemala	108,889	14	44	1	2.10	1.00	49	4/16
Honduras	112,088	7	27	1	2.04	0.96	17	16/4
Jamaica	11,525	21	19	1	19.89	9.45	173	4
Mexico	1,967,183	12	22	9	1.05	0.51	26	4/17/2/1
Nicaragua	148,000	6	46	1	1.55	0.72	15	16
Panama	76,650	8	81	1	2.99	1.42	20	16
Puerto Rico	8,891	30	13	1	25.78	12.23	310	4
USA	9,191,802	20	32	30	0.74	0.37	22	11/19/2/8/18/1/13

(continued)

Information and Data Costs and Cloud Zones for Individual Countries Assuming Total Skylark Coverage (continued)

Country	Land area (km^2)	% cultivated land area	% forest area	No. of firings for total coverage[a]	Information cost per km (£)[b]	Data cost per km (£)[c]	Approximate density 1971 (persons per km^2)	Cloud zone[d]
SOUTH AMERICA								
Argentina	2,808,602	7	25	11	0.90	0.44	8	2/4/28
Bolivia	1,098,580	4	61	3	0.63	0.30	5	25/1/4
Brazil	8,511,965	4	61	28	0.75	0.37	11	1/25/21/4/28/3
Chile	741,768	6	28	6	1.85	0.86	12	2/27/22/23/5
Colombia	1,138,914	4	61	4	0.81	0.38	19	1/16/17
Ecuador	455,454	11	55	2	1.01	0.48	22	1
French Guiana	90,000	1	95	1	2.55	1.21	0.5	1
Guyana	215,000	1	84	1	1.07	0.51	3	1
Paraguay	406,752	2	51	2	1.13	0.54	5	4
Peru	1,285,215	2	68	5	0.89	0.41	11	6/1/25
Surinam	163,800	-	91	1	1.40	0.65	2	1
Uruguay	186,926	12	3	1	1.23	0.59	16	28
Venezuela	912,050	6	53	3	0.75	0.37	8	1/17
ASIA								
Afghanistan	657,000	14	2	3	1.05	0.51	27	2
Burma	678,000	23	67	4	1.35	0.64	25	16/12
Bangladesh	142,779	64	15	1	1.61	0.76	420	16
Ceylon	65,610	29	51	1	3.49	1.66	193	4
Brunei	5,800	11	85	1	39.52	18.79	23	4
Cyprus	9,251	47	19	1	24.73	1.78	69	2
Malaysia	329,600	8	75	3	2.19	1.00	31	4/12/3
India	3,268,081	50	17	13	0.92	0.44	168	16/17/2/4
Indonesia	1,900,000	9	64	12	1.44	0.69	84	25/4/12
Iran	1,621,860	7	7	7	0.99	0.47	18	2/1/18
Iraq	438,446	17	4	2	1.04	0.51	22	2/1
Israel	20,700	20	5	1	11.07	5.25	146	2

(continued)

Information and Data Costs and Cloud Zones for Individual Countries Assuming Total Skylark Coverage (continued)

Country	Land area (km^2)	% cultivated land area	% forest area	No. of firings for total coverage[a]	Information cost per km (£)[b]	Data cost per km (£)[c]	Approximate density 1971 (persons per km^2)	Cloud zone[d]
ASIA (continued)								
Japan	369,662	16	69	3	1.85	0.88	283	13/20/14
Jordan	97,740	12	1	1	2.34	1.13	24	2/1
Lebanon	8,800	29	9	1	26.05	12.39	7.15	2
Pakistan	803,941	28	25	3	0.85	0.40	62	2/17
Philippines	299,400	26	41	3	2.30	1.09	127	3/4
Saudi Arabia	2,100,000	-	1	8	0.87	0.41	4	1/2
Syria	185,680	36	2	1	1.23	0.59	35	2/18
South Korea	98,431	23	67	1	2.33	1.10	324	10/20
Thailand	514,000	22	53	3	1.34	0.64	69	12
Turkey	780,576	34	14	3	0.87	0.41	46	18/2
AFRICA								
Angola	1,246,700	1	35	4	0.75	0.34	46	26/2/5
Algeria	2,466,833	3	1	9	0.84	0.40	6	1/2/18
Botswana	575,000	-	2	2	0.80	0.38	1	26/2
Burundi	27,834	37	3	1	8.24	3.90	130	25
Chad	1,284,000	6	13	5	0.89	0.41	3	2/17/1/16
Central African Republic	617,000	9	12	2	0.75	0.34	3	16/17
Cameroun	474,000	30	28	2	0.97	0.47	11	16/17
Congo	342,000	2	48	2	1.34	0.64	8	1/21/16
Dahomey	115,762	14	19	1	1.98	0.95	25	16/17
Egypt	1,000,000	3	-	4	0.93	0.43	34	1/2
Ethiopia	1,023,000	10	7	5	1.12	0.54	21	17/2
Ghana	238,537	22	35	1	0.97	0.47	37	16/17
Guinea	245,857	na	na	1	0.93	0.45	16	16/17
Ivory Coast	322,463	6	74	1	0.71	0.34	14	16/1
Kenya	582,600	3	3	2	0.79	0.38	20	4/17

(continued)

Information and Data Costs and Cloud Zones for Individual Countries Assuming Total Skylark Coverage (continued)

Country	Land area (km^2)	% cultivated land area	% forest area	No. of firings for total coverage[a]	Information cost per km (£)[b]	Data cost per km (£)[c]	Approximate density 1971 (persons per km^2)	Cloud zone[d]
AFRICA (continued)								
Libya	1,759,540	1	-	6	0.78	0.37	1	1/2
Malagasy	594,180	5	22	2	0.77	0.37	11	26/4
Malawi	126,338	11	9	1	1.82	0.86	38	25/4
Mali	1,204,021	na	na	5	0.96	0.45	4	2/17
Mauritania	1,085,805	-	14	4	0.84	0.40	1	2
Mozambique	784,961	3	25	3	0.87	0.41	11	26/4/25
Morocco	500,000	18	12	2	0.92	0.44	34	2/18
Niger	1,188,794	12	12	4	0.77	0.37	3	2/1/17
Namibia	824,295	1	3	3	0.83	0.40	1	2/26
Nigeria	923,773	24	34	3	0.75	0.34	61	17/16
Rwanda	26,330	38	6	1	8.72	4.13	126	4
Rhodesia	390,622	5	60	1	0.59	0.28	14	26/25
Senegal (& Gambia)	206,462	28	27	1	1.11	0.52	21	17/2
Somalia	637,660	2	23	3	1.08	0.51	4	2/4/17
South Africa, (& Swaziland, Lesotho)	1,268,790	10	1	5	0.91	0.49	18	29/2/26
Spanish Sahara	266,000	na	na	2	1.72	1.96	-	2
Sudan	2,505,813	3	37	8	0.72	0.34	6	2/17/16
Tanzania	939,700	13	38	4	0.98	0.47	14	4/25
Togo	56,000	38	9	1	4.09	1.94	36	16/17
Tunisia	164,150	35	7	1	1.40	0.65	28	2/18
Uganda	243,410	10	7	1	0.94	0.45	43	4/16
Upper Volta	274,122	18	7	1	0.84	0.40	20	17/2
Zaire	2,345,409	21	43	9	0.87	0.41	10	25/4/16/21/1

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Information and Data Costs and Cloud Zones for Individual Countries Assuming Total Skylark Coverage (continued)

Country	Land area (km^2)	% cultivated land area	% forest area	No. of firings for total coverage[a]	Information cost per km (£)[b]	Data cost per km (£)[c]	Approximate density 1971 (persons per km^2)	Cloud zone[d]
OCEANIA								
Australia	7,686,900	5	5	30	0.89	0.41	2	26/28/27/2/1/25
New Caledonia	19,103	4	15	1	1.20	5.71	6	3/4
New Zealand	268,680	3	23	3	2.56	1.21	11	22/29
Papua New Guinea	461,700	-	69	3	1.49	0.71	3	3/4

a Assuming survey scope of 435,000 km^2 for individual Skylarks, number of firings required to cover totality or near-totality of each territory considered independently. b All-inclusive system incorporating Baseline Vehicle B, (10-off) c Cost of launching Baseline Vehicle B plus film processing. d Zones are given for each country in descending order of importance. na Not available. - Negligible.

Sources: EIU and Oxford Institute of Economics and Statistics.

Information and Data Costs and Time Zones for [illegible] Countries [illegible]

Country	Land area (km²)	% Culti- vated land 1968	% forest area	No. of frames for total coverage[a]	Total [illegible] cost (\$M)[b]	[illegible] cost per km² (\$)[c]	Approximate [illegible]	Time zone[d]
OCEANIA								
Australia	7,686,850	[illegible]	[illegible]	30	[illegible]	0.[illegible]	5	[illegible]
New Caledonia	19,103	[illegible]	13	2	1.[illegible]	[illegible]	6	[illegible]/19
New Zealand	268,676	[illegible]	23	3	[illegible].03	1.21	11	29/23
Papua New Guinea	461,706	-	69	3	1.45	0.[illegible]	6	[illegible]

a. Assuming survey scope of 185,000 km² for individual Skylarks, number of frames required to cover totality or near-totality of each territory considered independently. b. All-inclusive system incorporating Sounding Vehicle B, (10-cd) c. Cost of launching Sounding Vehicle B plus film processing. d Zones are given for each country in descending order of importance. na Not available. - Negligible.

Sources: EIU and Oxford Institute of Economics and Statistics.

TABLE ID Major Non-Communist Grower-Exporters of Cash-Crops

Cash-crop	Country	Order of magnitude of recent annual exports ('000 metric tons)
Wheat	Canada	15,000
	USA	23,000
	Mexico	280
	Haiti	10
	Argentina	3,000
	Guayana	9
	Denmark	130
	Finland	100
	France	7,000
	W. Germany	2,000
	Greece	120
	Italy	1,000
	Netherlands	700
	Spain	420
	Sweden	330
	UK	20
	Kenya	100
	Lesotho	10
	Rhodesia	10
	Senegal	30
	South Africa	20
	Tunisia	5
	India	6
	Iran	4
	Iraq	150
	Japan	50
	Jordan	7
	Lebanon	8
	Malaysia	10
	Pakistan	110
	Yemen	20
	Australia	10,000

Continued....

Major Non-Communist Grower-Exporters of Cash-Crops (continued)

Cash-crop	Country	Order of magnitude of recent annual exports ('000 metric tons)
Barley	Canada	5,000
	USA	1,000
	Mexico	20
	Argentina	100
	Chile	20
	Uruguay	20
	Denmark	300
	France	4,000
	W. Germany	600
	Italy	40
	Netherlands	170
	Sweden	440
	UK	110
	Iraq	60
	Syria	180
	Yemen	50
	Australia	2,000
Maize	Canada	20
	USA	22,000
	Mexico	420
	El Salvàdor	30
	Honduras	20
	Nicaragua	10
	Argentina	6,000
	Brazil	2,000
	Paraguay	20
	Austria	1
	Belgium	500
	Denmark	2
	France	4,000
	W. Germany	320
	Italy	30
	Netherlands	600
	Spain	1
	UK	20
	Angola	170
	Dahomey	2
	Kenya	190
	Madagascar	6
	Malawi	5
	Morocco	30

Continued......

Major Non-Communist Grower-Exporters of Cash-Crops (continued)

Cash-crop	Country	Order of magnitude of recent annual exports ('000 metric tons)
Maize (continued)	Mozambique	120
	South Africa	3,000
	Rhodesia	250
	Tanzania	30
	Zambia	9
	Burma	20
	Indonesia	800
	Khmer	60
	Lebanon	2
	Nepal	3
	Thailand	2,000
	Australia	40
Oats	Canada	230
	USA	330
	Argentina	320
	Chile	7
	Belgium	10
	Denmark	5
	Finland	160
	France	270
	W. Germany	20
	Italy	6
	Netherlands	100
	Spain	70
	Sweden	540
	UK	120
	Algeria	10
	South Africa	2
	Australia	560
Rye	Canada	270
	USA	140
	Argentina	30
	Belgium	10
	France	60
	W. Germany	220
	Netherlands	70
	Sweden	100

Continued.....

Major Non-Communist Grower-Exporters of Cash-Crops (continued)

Cash-crop	Country	Order of magnitude of recent annual exports ('000 metric tons)
Rice	USA	2,000
	Mexico	50
	Nicaragua	20
	Argentina	100
	Brazil	160
	Colombia	40
	Guyana	110
	Surinam	40
	Uruguay	70
	Venezuela	60
	Italy	440
	Spain	100
	Algeria	3
	Egypt	770
	Madagascar	70
	Malawi	8
	South Africa	2
	Tanzania	10
	Burma	810
	India	30
	Japan	910
	Khmer	200
	Malaysia	7
	Nepal	290
	Pakistan	480
	Thailand	2,000
	Yemen	9
	Australia	180

Source: FAO.

TABLE IE Net Flows by Region - Bilateral ODA and Receipts from Multilateral Agencies, 1969-71

(Million US dollars)

	Europe			Africa			America			Asia		
	1969	1970	1971	1969	1970	1971	1969	1970	1971	1969	1970	1971
Australia	0.01	0.01	-	0.80	1.50	1.30	0.02	0.09	0.04	35.87	41.02	47.83
Austria	1.08	0.17	-0.09	3.51	0.90	4.33	-0.46	0.02	-0.57	1.46	9.75	-0.92
Belgium	2.01	1.64	1.23	70.18	78.45	86.63	3.57	3.80	3.50	8.21	7.62	17.52
Canada	0.47	3.30	5.32	29.96	51.28	84.48	15.14	26.34	23.10	108.13	175.19	164.07
Denmark	-0.03	0.33	0.35	15.56	19.99	18.49	3.10	5.42	0.60	9.91	7.19	12.55
France	33.80	27.20	21.60	547.50	533.90	560.60	152.30	167.00	187.70	53.00	67.00	94.40
Germany	76.93	44.41	21.88	109.01	120.79	131.59	68.20	86.54	82.06	179.79	196.69	271.83
Italy	50.50	-5.63	27.57	30.39	43.59	38.70	-13.39	-10.29	-2.25	34.89	32.28	68.84
Japan	2.56	-0.83	-0.80	4.06	8.45	-12.77	-13.14	-15.01	-11.18	345.47	377.82	428.85
Netherlands	1.72	1.26	1.47	3.86	12.85	17.05	34.74	54.94	51.11	28.20	71.43	64.91
Norway	0.53	0.51	-0.02	8.70	7.53	9.70	0.22	0.11	0.05	3.82	6.18	7.84
Portugal	-	-	-	45.23	13.68	88.40	-	-	-	3.31	3.30	1.77
Sweden	0.48	1.12	2.28	28.33	24.61	26.06	0.27	1.77	1.45	18.33	25.78	27.06
Switzerland	0.61	-0.13	-0.69	7.31	6.35	4.87	1.30	3.40	1.93	6.02	6.48	10.34
UK	16.76	30.50	23.03	132.17	125.04	127.62	33.72	36.25	61.38	128.78	167.79	230.21
US	44.00	47.00	83.00	276.00	254.00	312.00	560.00	507.00	421.00	1,742.00	1,623.00	1,773.00
Bilateral Total	231.43	150.86	186.13	1,312.57	1,292.31	1,524.59	845.59	867.38	819.92	2,707.19	2,818.52	3,220.10
IBRD	59.04	53.33	71.12	45.07	39.39	105.57	160.14	253.08	316.58	110.81	138.39	154.73
IFC	2.30	14.50	12.00	12.86	10.11	1.00	16.60	18.70	28.35	17.05	23.85	14.30
IDA	10.67	7.24	3.72	61.64	68.57	73.21	5.90	8.51	8.97	166.55	73.23	192.95
IDB	-	-	-	-	-	6.18	164.79	306.25	293.56	-	-	-
AfDB	-	-	-	-7.80	-1.97	-11.92	-	-	-	-24.30	-15.36	46.11
AsDB	-	-	-	-	-	-	-	-	-	12.34	18.78	29.00
EEC	36.84	31.90	30.38	119.75	150.11	176.34	4.38	10.96	17.82	137.66	151.63	163.33
UN	18.64	12.62	17.12	138.06	143.45	146.80	58.56	60.74	67.09	410.11	390.52	600.42
Multilateral Total	127.49	119.59	134.34	369.58	409.66	497.18	410.37	658.24	732.37	410.11	390.52	600.42
Overall, Total	358.92	270.45	320.47	1,682.15	1,701.97	2,021.77	1,255.96	1,525.62	1,552.29	3,127.30	3,209.04	3,820.52

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Net Flows by Region - Bilateral ODA and Receipts from Multilateral Agencies, 1969-1971 (Continued)
(Million US dollars)

	Oceania			Unallocated			Total		
	1969	1970	1971	1969	1970	1971	1969	1970	1971
Australia	120.26	147.70	141.76	1.19	0.20	-	158.15	190.52	190.93
Austria	-	-	-	1.29	1.87	1.95	6.88	12.71	4.70
Belgium	-	-	-	0.82	0.70	1.40	84.79	92.21	110.28
Canada	-	-	0.02	6.46	11.57	17.60	160.16	267.68	294.59
Denmark	0.01	-	-	2.69	4.54	4.39	31.24	37.47	36.38
France	35.90	42.20	58.80	37.50	33.30	36.50	860.00	860.00	959.60
Germany	-	-	-	17.78	17.69	22.19	451.71	466.12	529.55
Italy	-	-	-	2.48	2.78	4.20	104.87	62.73	137.06
Japan	0.01	0.01	0.09	0.71	1.07	2.29	339.67	371.51	432.02
Netherlands	-	-	0.08	36.43	14.13	17.77	104.95	154.61	152.39
Norway	-	-	-	0.12	0.29	0.57	13.39	14.62	18.14
Portugal	-	-	-	9.47	11.14	8.20	58.01	28.12	98.37
Sweden	-	-	-	7.44	9.78	10.81	54.85	63.06	67.66
Switzerland	0.03	0.02	0.02	2.14	1.50	2.93	17.41	17.62	19.40
UK	18.53	19.79	20.61	25.08	20.13	23.91	355.04	399.50	486.76
US	46.00	48.00	54.00	94.00	178.00	250.00	2,762.00	2,657.00	2,893.00
Bilateral Total	220.74	257.72	275.38	245.60	308.69	404.71	5,563.12	5,695.48	6,430.83
IBRD	0.10	0.65	2.75	-	-	-	375.16	484.84	650.75
IFC	-	-	-	-	-	-	48.81	67.16	55.65
IDA	0.14	0.84	3.94	-	-	-	244.90	158.39	282.79
IDB	-	-	-	-	-	-	164.79	306.25	299.74
AfDB	-	-	-	-	-	-	-7.80	-1.97	-11.92
AsDB	-	0.46	0.65	-	-	-	-24.30	-14.90	46.76
EEC	0.53	2.08	1.90	6.05	6.86	7.70	179.89	220.69	263.14
UN	1.80	1.87	1.87	17.40	18.28	18.34	372.12	388.59	414.55
Multilateral Total	2.57	5.90	11.11	23.45	25.14	26.04	1,353.57	1,609.05	2,001.46
Overall, Total	223.31	263.62	286.49	269.05	333.83	430.75	6,916.69	7,304.53	8,432.29

Source: OECD.

TABLE IF Net Receipts of Individual Developing countries and Territories, ODA from DAC Countries and Receipts from Multilateral Agencies 1969-1971 (Annual Averages)

Total ($ million) and per capita ($)

	Bilateral	Multi-lateral	Total	Per capita receipts
I. Europe, Total	189.47	127.14	316.61	3.24
Cyprus	2.27	3.82	6.09	9.67
Gibraltar	2.62	0.00	2.62	97.04
Greece	6.20	10.33	16.53	1.87
Malta	14.04	0.53	14.57	45.11
Spain	13.69	11.11	24.80	0.75
Turkey	158.68	70.75	229.43	6.66
Yugoslavia	-13.92	30.30	16.38	0.80
Other and unallocated	5.91	0.30	6.21	-
II. Africa, Total	1,376.49	425.47	1,801.96	5.50
North of Sahara, Total	314.27	59.46	373.73	5.52
Algeria	109.69	6.33	116.02	8.69
Libya	3.45	1.78	5.23	2.80
Morocco	88.31	16.25	104.56	6.95
Tunisia	97.52	23.72	121.24	24.65
Egypt	15.29	11.39	26.68	0.82
Other and unallocated	*	0.00	0.00	
South of Sahara, Total	1,035.14	355.76	1,390.90	5.34
Angola	10.88	0.00	10.88	2.00
Botswana	12.00	3.23	15.23	24.21
Burundi	11.84	5.56	17.40	5.01
Cameroon	29.47	22.45	51.92	9.05
Cape Verde Islands	6.08	0.00	6.08	24.32
Central African Rep	10.51	5.74	16.25	10.70
Chad	17.00	8.42	25.42	7.24
Comoro Islands	7.07	0.60	7.67	28.41
Congo (Brazzaville)	10.76	9.27	20.03	22.76
Zaire Rep	71.52	16.22	87.74	4.90
Dahomey	12.36	6.27	18.63	7.06
Ethiopia	33.44	13.77	47.21	1.91
Gabon	15.10	5.25	20.35	41.96
Gambia	2.26	0.33	2.59	7.19
Ghana	53.87	7.39	61.26	7.34
Guinea	8.09	16.81	24.90	6.40
Guinea (Port.)	4.88	0.12	5.00	9.43
Ivory Coast	37.84	17.65	55.49	11.23
Kenya	49.12	22.13	71.25	6.54
Lesotho	9.83	2.96	12.79	13.75
Liberia	12.02	3.52	15.54	10.50
Malagasy Republic	28.07	20.00	48.07	7.22
Malawi	23.27	8.58	31.85	7.24

	Bilateral	Multi-lateral	Total	Per capita receipts
Africa				
South of Sahara (Continued)				
Mali	13.64	11.01	24.65	5.05
Mauritania	3.71	9.17	12.88	11.34
Mauritius	5.05	0.94	5.99	7.50
Mozambique	26.88	0.00	26.88	3.56
Niger	25.36	9.42	34.78	8.90
Nigeria	82.44	34.10	116.54	1.80
Reunion	95.93	2.42	98.35	225.57
Rhodesia	0.60	-4.04	-3.44	-0.68
Rwanda	16.87	4.54	21.41	5.86
Sao Tome and Principe	1.13	0.00	1.13	17.12
Senegal	31.36	19.02	50.38	13.29
Seychelles	4.31	0.04	4.35	85.29
Sierra Leone	7.00	2.63	9.63	3.84
Somalia	20.26	9.75	30.01	10.99
Terr. Afars and Issas	10.47	0.53	11.00	118.28
St Helena and dependencies	1.07	0.00	1.07	-
Sudan	0.21	10.94	11.15	0.73
Swaziland	5.36	1.12	6.48	15.80
Tanzania	38.15	15.01	53.16	4.23
Togo	9.11	8.14	17.25	9.10
Uganda	20.83	8.87	29.70	3.13
Upper Volta	14.92	10.01	24.93	4.72
Zambia	15.11	5.08	20.19	50.2
Other and unallocated	100.32	0.76	101.08	
1. EACSO	7.77	0.00	7.77	
Unspecified Africa, Total	27.07	10.25	37.32	
III. America, Total	844.30	600.33	1,444.63	5.18
North and Central, Total	352.36	207.47	559.83	6.38
Bahamas	0.07	0.05	0.12	0.73
Barbados	2.49	0.02	2.51	9.88
Bermuda	0.01	0.00	0.01	0.20
Costa Rica	12.41	5.26	17.67	10.52
Cuba	0.22	1.19	1.41	0.16
Dominican Republic	28.91	18.64	47.55	12.03
El Salvador	10.56	1.30	11.86	3.50
Guadeloupe	55.97	0.88	56.85	175.46
Guatemala	12.42	9.01	21.43	4.27
Haiti	4.29	1.29	5.58	1.17
Honduras	9.88	14.45	24.33	9.75

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Net Receipts of Individual Developing Countries and Territories, ODA from DAC Countries and Receipts from Multilateral Agencies 1969-1971 (Annual Averages) (Continued)

Total ($ million) and per capita ($)

	Bilateral	Multi-lateral	Total	Per capita receipts
America				
North and Central (Cont'd)				
Honduras (Br.)	5.81	0.13	5.94	50.77
Jamaica	12.17	5.92	18.09	9.71
Martinique	70.23	0.30	70.53	209.91
Mexico	13.56	128.08	141.64	2.89
Netherlands Antilles	20.90	2.93	23.83	108.81
Nicaragua	16.96	7.09	24.05	12.56
Panama	15.70	7.08	22.78	16.08
St Pierre and Miquelon	4.30	0.07	4.37	
Trinidad and Tobago	4.61	3.43	8.04	7.73
West Indies (Br.)	30.95	0.36	31.31	55.42
Other and unallocated	19.96	0.00	19.96	
South, Total	460.79	373.43	834.22	4.35
Argentina	4.19	63.68	67.87	2.83
Bolivia	26.36	15.75	42.11	8.76
Brazil	125.63	134.70	260.33	2.82
Chile	47.87	33.52	81.39	8.51
Colombia	105.62	71.90	177.52	8.68
Ecuador	15.05	8.37	23.42	3.98
Falkland Islands	0.13	0.00	0.13	..
Guyana	16.19	1.52	17.71	24.36
Guiana (Fr.)	22.07	0.77	22.84	..
Paraguay	11.31	10.98	22.29	9.63
Peru	33.88	19.53	53.41	4.05
Surinam	20.74	2.56	23.30	61.15
Uruguay	13.28	0.99	14.27	5.00
Venezuela	5.96	9.15	15.11	1.50
Other and unallocated	12.51	0.00	12.51	
Unspecified America, Total	31.15	19.43	50.58	
IV. Asia, Total	2,915.27	470.35	3,385.62	3.18
Middle East, Total	122.45	102.26	224.71	3.34
Bahrein	0.23	0.04	0.27	1.27
Iran	10.27	25.59	35.86	1.26
Iraq	-0.02	8.48	8.46	0.90
Israel	62.74	0.10	62.84	22.27
Jordan	28.28	31.30	59.58	26.57
Kuwait	0.04	-2.91	-2.87	-4.37
Lebanon	4.23	7.19	11.42	4.32

	Bilateral	Multi-lateral	Total	Per capita receipts
Asia				
Middle East (Cont'd)				
Muscat and Oman	0.04	-0.03	0.01	0.01
Qatar	*	0.00	*	*
Saudi Arabia	0.20	1.12	1.32	0.18
Yemen (People's DR)	1.51	1.88	3.39	2.78
Syria (Arab Rep.)	1.67	15.28	16.95	2.89
Trucial Oman	0.49	0.01	0.50	2.44
Yemen (Arab Rep.)	5.87	2.54	8.41	1.51
Other and unallocated	6.90	11.67	18.57	
South, Total	1,281.19	197.91	1,479.10	2.06
Afghanistan	27.07	5.57	32.64	2.34
Bhutan	0.15	0.00	0.15	0.18
Burma	28.26	-0.24	28.02	1.04
Ceylon	45.08	6.54	51.62	4.22
India	798.67	108.14	906.81	1.72
Maldive Islands	0.30	0.08	0.38	3.52
Nepal	16.12	2.59	18.71	1.72
Pakistan	361.98	75.23	437.21	3.45
Other and unallocated	3.57	0.00	3.57	
IV. Far East, Total	1,488.35	164.74	1,653.09	5.92
Brunei	0.01	0.00	0.01	0.09
Khmer Rep.	22.08	1.03	23.11	3.17
Taiwan	7.48	35.91	13.39	3.14
Hong Kong	1.99	-0.91	1.08	0.27
Indonesia	436.89	20.56	457.45	3.92
Korea (South)	300.42	30.06	330.48	10.61
Laos	68.51	0.70	69.21	23.92
Macao	1.17	0.90	2.07	8.15
Malaysia	29.71	15.77	45.48	4.29
Philippines	60.33	18.57	78.90	2.20
Singapore	23.01	15.47	38.48	19.08
Thailand	63.69	26.04	89.73	2.55
Timor	1.62	0.00	1.62	2.74
Vietnam (South)	451.47	0.58	452.05	25.30
Other and unallocated	17.63	0.05	17.68	
1. Mekong Delta	0.66	0.00	0.66	
2. Other	1.68	0.00	1.68	
Unspecified Asia, Total	23.28	5.43	28.71	

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Net Receipts of Individual Developing Countries and Territories, ODA from DAC Countries and Receipts from Multilateral Agencies 1969-1971 (Annual Averages) (Continued)

Total ($ million) and per capita ($)

	Bilateral	Multi-lateral	Total	Per capita receipts
V. Oceania, Total	251.28	6.53	257.81	69.89
Fiji Islands	8.26	0.57	8.83	17.45
Gilbert and Ellice Islands	1.95	0.05	2.00	36.36
French Polynesia	19.01	0.30	19.31	183.90
New Caledonia	24.73	1.14	25.87	263.98
New Hebrides (Br. and Fr.)	3.69	0.01	3.70	46.25
Pacific Islands (US)	49.00	0.12	49.12	501.22
Papua New Guinea	134.81	3.10	137.91	58.36
Solomon Islands (Br.)	7.40	0.16	7.56	47.55
Tonga	0.82	0.03	0.85	10.24
Wallis and Futuna	-	0.13	0.13	..
Western Samoa	0.27	0.90	1.17	8.36
Other and unallocated	1.35	0.01	1.36	
Unspecified Other, Total	319.67	24.88	344.55	
Overall, Total	5,896.48	1,654.69	7,551.17	4.27

TABLE IG UNDP: Project Expenditures, by Country or Area and by Sector, 1973[a]

(thousand dollars)

	Sectors													
	Agriculture, forestry & fisheries	Education	General economic & social policy & planning	Health	Industry	International trade	Labour, management & employment	Natural resources	Science & technology	Social security & other social services	Transport & communications	Other	Total	Agriculture etc., & natural resources as % of total
AFRICA														
Botswana	267	65	93	99	571	-	9	15	40	65	48	-	1,272	22
Burundi	610	445	334	34	339	-	41	-	26	28	57	-	1,914	31
Central African Republic	547	246	38	187	256	-	76	-	30	-	81	25	1,410	39
Chad	423	241	36	15	95	-	4	129		30	61		1,034	53
Comoro Islands	4	-	-	-	3	-	-	-	-	-	-	-	7	57
Congo	818	29	89	-	313	81	35	-	-	-	-	-	1,365	60
Dahomey	398	81	112	2	185	-	7	3	-	22	75	-	885	45
Equatorial Guinea	13	620	62	-	25	-	3	20	-	9	110	-	862	4
Ethiopia	1,133	1,014	618	232	694	12	154	597	-	55	107	64	4,680	37
Gabon	713	88	33	13	171	-	30	-	47	26	91	-	1,212	59
Gambia	47	46	141	22	2	15	131	-	-	39	41	-	484	10
Ghana	495	215	106	48	395	-	196	169	35	10	50	-	1,719	39
Guinea	232	4	254	43	57	-	6	-	89	-	97	-	782	30
Ivory Coast	603	978	335	39	146	45	-	-	65	331	12	79	2,633	23
Kenya	1,521	478	107	216	496	30	125	443	107	30	39	-	3,592	55
Lesotho	708	91	212	72	220	50	26	7	15	27	56	20	1,504	48
Liberia	697	399	306	-	141	30	42	55	30	214	44	27	1,985	38
Madagascar	552	30	23	131	283	-	23	2	474	36	222	-	1,776	31
Malawi	637	47	56	-	373	-	118	36	9	122	410	-	1,808	37
Mali	1,176	329	189	211	30	-	280	204	321	-	62	-	2,802	49
Mauritania	549	42	184	-	131	-	-	410	-	-	69	-	1,385	69
Mauritius	179	36	14	5	170	43	140	-	16	2	7	14	626	29
Niger	30	207	741	118	500	-	-	-	4	5	36	37	1,678	2
Nigeria	1,381	862	326	390	181	30	536	219	236	26	850	-	5,037	32
Rwanda	168	398	47	39	580	-	13	-	20	-	307	-	1,572	11
Senegal	681	33	543	192	776	-	106	-	153	4	11	-	2,499	27
Seychelles	5	-	-	-	-	-	61	-	-	-	-	-	66	8
Sierra Leone	84	-	316	2	116	30	-	84	57	43	480	-	1,212	14
Somalia	1,033	154	446	88	544	-	32	-	155	-	261	-	2,713	38

(Continued)

UNDP: Project Expenditures, by Country or Area and by Sector, 1973[a] (Continued)
(thousand dollars)

AFRICA (Continued)	Sectors: Agriculture forestry & fisheries	Education	General economic & social policy & planning	Health	Industry	International trade	Labour, management & employment	Natural resources	Science & technology	Social security & other social services	Transport & communications	Other	Total	Agriculture etc. & natural resources as % of total
Swaziland	133	120	73	2	352	1	32	3	-	115	51	-	882	15
Togo	297	556	431	30	245	41	28	110	3	246	16	5	2,008	20
Uganda	480	53	285	67	11	28	79	-	233	19	-	-	1,255	38
United Republic of Cameroon	608	561	363	331	143	-	76	181	31	30	297	-	2,621	30
United Republic of Tanzania	1,155	128	138	88	765	-	53	-	77	132	-	-	2,536	46
Upper Volta	390	169	9	66	555	3	27	10	5	31	51	-	1,316	30
Zaire	628	250	78	26	924	13	233	-	247	-	1,089	-	3,488	18
Zambia	770	252	108	88	381	-	185	29	30	-	805	-	2,648	30
Sub-total	20,166	9,267	7,245	2,896	11,170	452	2,831	2,724	2,556	1,695	5,992	271	67,268	34

a Provisional.

UNDP: Project Expenditures, by Country or Area and by Sector, 1973

(thousand dollars)

	Sectors: Agri-culture, forestry & fish-eries	Educa-tion	General economic & social policy & planning	Health	In-dustry	Inter-national trade	Labour, manage-ment & employ-ment	Natural re-sources	Science & tech-nology	Social security & other social services	Tran-sport & com-munica-tions	Other	Total	Agricul-ture etc. & natural re-sources as % of total
ASIA AND THE FAR EAST														
Afghanistan	990	640	228	319	207	19	58	334	159	93	1,783	-	4,830	27
Bangladesh	14	-	10	-	1	-	-	14	-	3	10	-	52	54
Brunei	3	-	-	-	-	-	-	-	-	-	-	-	3	100
Burma	437	203	15	180	993	-	-	75	14	-	12	-	1,929	27
Cook Islands	80	-	21	-	2	1	-	6	-	-	-	-	110	78
Fiji	277	4	30	-	199	27	12	62	-	-	-	-	611	55
Gilbert & Ellice Islands	16	-	1	-	-	-	-	-	-	-	31	-	48	33
Hong Kong	-	10	3	-	46	-	8	-	-	-	-	-	67	-
India	1,661	196	241	465	1,203	96	8	258	564	9	630	6	5,328	36
Indonesia	1,832	518	469	106	780	320	165	4	727	4	1,261	100	6,286	29
Iran	1,421	212	361	417	689	47	557	1	59	161	576	48	4,549	31
Japan	-	-	-	-	-	-	-	-	10	-	-	-	10	-
Khmer Republic	722	18	224	261	73	-	132	33	108	105	74	12	1,762	43
Laos	66	164	50	169	69	-	84	-	2	34	166	-	804	8
Malaysia	865	264	408	-	659	-	110	8	521	5	286	-	3,126	28
Maldives	53	2	-	50	-	-	-	-	-	-	-	-	105	50
Mongolia	286	19	670	114	443	-	-	-	528	-	49	-	2,119	13
Nepal	1,196	62	143	220	246	-	205	-	37	10	951	59	3,129	38
New Caledonia	-	-	-	-	18	-	-	-	-	-	-	-	18	-
New Hebrides	50	20	4	30	-	-	-	-	-	-	-	-	104	48
Niue	18	-	1	-	-	-	-	-	-	-	-	-	19	15
Pakistan	531	230	131	16	333	20	97	7	7	379	268	64	2,083	26
Papua New Guinea	33	231	12	53	236	-	-	-	60	14	7	-	646	5
Philippines	862	34	402	49	414	61	43	935	184	3	1,000	14	4,001	45
Republic of Korea	920	30	269	-	213	-	12	443	40	39	25	-	1,991	68
Republic of Viet-Nam	291	-	-	8	-	12	61	-	86	14	107	-	579	50
Singapore	223	-	33	40	462	-	8	-	500	34	460	5	1,765	13
Solomon Islands	-	14	1	63	-	-	29	-	-	-	92	-	199	-
Sri Lanka	958	79	366	62	433	96	288	30	193	18	112	-	2,635	37
Thailand	920	77	206	73	580	31	71	10	738	41	87	-	2,834	33

(Continued)

UNDP: Project Expenditures, by Country or Area and by Sector, 1973 (Continued)
(thousand dollars)

	Sectors: Agriculture, forestry & fisheries	Education	General economic & social policy & planning	Health	Industry	International trade	Labour, management & employment	Natural resources	Science & technology	Social security & other social services	Transport & communications	Other	Total	Agriculture etc. & natural resources as % of total
Tonga	7	-	-	-	-	-	-	-	-	-	9	-	16	43
Western Samoa	238	18	212	69	44	-	33	15	16	16	62	-	723	35
Sub-total	14,971	3,045	4,510	2,755	8,343	730	1,980	2,234	4,565	980	8,057	308	52,481	33
EUROPE - MEDITERRANEAN & THE MIDDLE EAST														
Albania	3	63	-	43	2	-	-	-	19	-	4	-	134	2
Algeria	1,404	339	211	774	188	223	199	-	780	67	425	35	4,645	30
Bahrain	213	130	-	3	-	1	-	-	-	9	-	-	356	60
Bulgaria	260	-	8	204	253	14	1	9	36	6	411	8	1,210	32
Cyprus	622	-	22	6	55	6	357	-	65	21	-	63	1,217	51
Czechoslovakia	6	-	61	104	31	-	4	-	10	5	-	-	221	3
Democratic Yemen	670	366	17	260	74	-	39	-	20	-	764	-	2,210	30
Egypt	1,036	3	415	248	1,190	-	83	655	702	-	613	1	4,946	34
Greece	357	42	3	72	425	-	-	41	212	-	621	12	1,785	22
Hungary	130	192	21	178	37	1	-	3	146	12	11	-	721	18
Iceland	5	-	-	-	76	85	-	-	-	-	-	-	166	3
Iraq	1,987	126	154	382	256	-	285	107	128	131	106	23	3,685	57
Israel	170	48	2	-	336	-	-	30	-	-	11	-	597	34
Jordan	1,213	45	209	59	366	-	-	-	301	139	123	2	2,457	49
Kuwait	108	-	-	-	232	-	-	41	-	-	-	-	381	39
Lebanon	827	480	5	67	3	-	195	38	4	32	352	-	2,003	43
Libyan Arab Republic	7	513	193	-	418	-	99	-	-	-	31	-	1,261	1
Malta	30	-	9	35	73	3	46	-	19	-	43	-	258	12
Morocco	1,401	212	183	386	319	73	133	-	38	28	-	249	3,022	43
Oman	3	31	19	-	-	7	-	-	-	-	23	-	83	4
Poland	310	2	5	388	217	1	25	37	26	12	252	-	1,275	27
Qatar	54	76	-	-	136	10	-	-	3	-	-	-	279	19
Romania	230	2	86	198	37	215	75	-	276	-	69	-	1,188	19
Saudi Arabia	316	93	64	-	489	-	12	-	23	139	775	-	1,911	17
Spain	387	307	2	27	335	-	-	165	-	-	1	-	1,224	45

(Continued)

UNDP: Project Expenditures, by Country or Area and by Sector, 1973 (Continued)

(thousand dollars)

EUROPE-MEDITERRANEAN & THE MIDDLE EAST (Continued)	Sectors: Agriculture, forestry & fisheries	Education	General economic & social policy & planning	Health	Industry	International trade	Labour, management & employment	Natural resources	Science & technology	Social security & other social services	Transport & communications	Other	Total	Agriculture etc., & natural resources as % of total
Sudan	1,061	220	214	9	611	23	252	95	33	37	310	7	2,872	40
Syrian Arab Republic	587	15	567	11	97	-	-	-	19	48	94	10	1,448	41
Tunisia	1,119	3	65	42	618	-	408	63	349	2	111	194	2,974	40
Turkey	1,538	39	77	256	716	3	109	359	50	32	471	6	3,656	52
United Arab Emirates	-	-	1	-	-	-	-	-	-	1	-	-	2	-
Yemen	1,161	68	94	621	9	-	30	-	3	43	246	-	2,275	51
Yugoslavia	132	-	9	24	224	-	-	45	55	-	6	-	495	36
Sub-total	17,347	3,415	2,715	4,396	7,824	666	2,351	1,687	3,318	763	5,873	610	50,966	37
LATIN AMERICA														
Antingua	-	7	84	12	12	-	20	-	-	69	10	-	214	-
Argentina	1,230	3	128	85	514	47	2	384	71	27	312	-	2,803	58
Bahamas	107	-	88	13	62	-	-	-	30	86	3	2	391	27
Barbados	-	-	3	15	20	13	-	-	1	-	26	-	78	-
Bolivia	326	30	796	53	411	13	-	194	241	-	1,052	30	3,146	17
Brazil	2,445	239	168	171	498	18	79	292	174	2	768	1	4,855	56
British Honduras	32	-	1	30	10	-	-	-	48	-	54	-	175	18
British Virgin Islands	-	-	-	-	-	-	-	-	-	30	1	-	31	-
Cayman Islands	-	-	53	20	-	-	-	-	1	20	1	-	95	-
Chile	1,002	257	155	48	942	25	-	212	74	25	525	-	3,265	37
Colombia	470	328	224	101	582	18	12	-	131	55	789	-	2,710	17
Costa Rica	225	224	85	13	205	3	3	18	60	13	389	-	1,238	20
Cuba	549	14	1	80	130	-	-	-	841	-	18	-	1,633	34
Dominica	3	-	92	22	22	-	44	-	-	15	5	-	203	1
Dominican Republic	574	122	247	79	29	42	57	58	199	12	120	-	1,539	41
Ecuador	624	-	168	203	173	57	16	30	67	30	136	3	1,507	43
El Salvador	102	7	2	30	16	-	12	9	68	56	24	-	326	13
Grenada	22	35	52	24	31	-	2	-	-	-	-	-	166	13
Guatemala	117	328	40	30	62	-	-	-	75	-	57	-	709	17
Guyana	3	3	-	180	20	-	-	4	17	1	596	-	924	1

(Continued)

UNDP: Project Expenditures, by Country or Area and by Sector, 1973 (Continued)
(thousand dollars).

LATIN AMERICA (Continued)	Sectors: Agri-culture, forestry & fish-eries	Educa-tion	General economic & social policy & planning	Health	In-dustry	Inter-national trade	Labour, manage-ment & employ-ment	Natural re-sources	Science & tech-nology	Social security & other social services	Tran-sport & com-munica-tions	Other	Total	Agricul-ture etc., & natural re-sources as % of total
Haiti	262	45	174	1	117	-	-	68	-	-	893	-	1,560	21
Honduras	498	33	164	-	182	-	30	-	72	-	51	-	1,030	48
Jamaica	466	28	119	52	768	17	8	-	-	1	15	2	1,476	32
Mexico	805	39	328	306	145	18	10	188	712	12	115	13	2,691	37
Montserrat	-	-	-	7	14	-	15	-	-	-	2	-	38	-
Netherlands Antilles	3	-	-	-	204	-	39	-	-	-	143	-	389	1
Nicaragua	338	60	-	48	-	-	2	433	8	-	10	-	899	86
Panama	456	245	184	50	426	-	10	46	5	140	583	-	2,145	23
Paraguay	50	318	82	30	228	-	-	68	187	-	395	-	1,358	9
Peru	1,036	36	559	29	325	95	56	-	2	89	213	71	2,511	41
Saint Kitts-Nevis-Anguilla	-	-	23	8	82	-	-	-	-	-	45	-	158	-
Saint Lucia	89	5	37	18	44	-	19	-	-	-	46	-	258	34
Saint Vincent	-	-	2	5	23	-	-	-	-	-	5	-	35	-
Surinam	223	-	126	64	-	-	-	391	-	-	5	-	809	75
Trinidad & Tobago	108	-	149	21	234	-	215	-	-	31	68	-	826	8
Uruguay	601	-	215	112	184	25	1	195	38	7	174	-	1,552	51
Venezuela	305	3	372	308	70	-	15	-	443	94	356	36	2,002	15
Sub-total	13,072	2,410	4,921	2,268	6,786	392	667	2,590	3,566	814	8,004	159	45,644	34
INTERCOUNTRY PROJECTS														
Regional	3,934	2,103	5,613	2,040	505	566	1,246	2,910	1,791	466	6,139	747	28,060	24
Interregional	350	71	100	194	365	1,225	229	65	77	73	633	-	3,380	12
Global	863	-	182	-	-	-	-	-	756	-	-	-	1,801	48
Sub-total	5,147	2,174	5,895	2,234	870	1,791	1,475	2,975	2,624	539	6,772	747	33,241	24
Total	70,703	20,311	25,286	14,549	34,993	4,031	9,304	12,210	16,629	4,791	34,698	2,095	269,000[b]	31

b Includes $19.4 million of undistributed expenditures by country and sector.

Source: United Nations.

TABLE IH IBRD, Loans and IDA Credits for Agriculture, by Project Type, 1970/71-1972/73

	1970/71			1971/72			1972/73		
	Number of projects	Loans & credits	Per cent of total loans & credits	Number of projects	Loans & credits	Per cent of total loans & credits	Number of projects	Loans & credits	Per cent of total loans & credits
		Million US dollars	Per cent		Million US dollars	Per cent		Million US dollars	
Irrigation	4	49.5	11.8	8	148.4	34.0	12	253.4	27.0
General agriculture	14	98.3	23.2	10	72.5	16.5	12	130.6	14.0
Agro-industries	2	16.2	4.0	1	6.3	1.5	6	213.0	22.7
Livestock	8	43.5	10.5	8	58.2	13.3	10	215.3	23.0
Fisheries	1	3.5	0.8	2	5.4	1.3	2	15.1	1.6
Forestry	-	-	-	-	-	-	1	20.0	2.1
Agricultural credit	7	208.1	49.6	7	145.5	33.4	4	89.7	9.6
Total	36	419.1	100.0	36	436.3	100.0	47	937.1	100.0

SECTION II

UNITED NATIONS PROJECTS

CONTENTS

SECTION IIA

United Nations

Large-Scale Projects Completed

AFRICA

Botswana
- Co-operative Development Centre (ILO)

Burundi
- Agricultural Technical Institute of Burundi (FAO)
- National School of Administration, Bujumbura
- Burundi Development Bank, Bujumbura (UN)
- Fishery Survey and Development Project (FAO)

Central African Republic
- Vocational Training Programme for Rural Artisans (ILO)
- Sanitation and Drainage, Bangui (WHO)
- Investigation of Limestone Deposits at Fatima (UN)

Congo
- Survey and Development of Pelagic Fish Resources (FAO)
- Planning and Development of Forest Resources in the Sibiti-Zanaga Zone (FAO)

Dahomey
- Strengthening of the Geological and Mining Service (UN)
- Development of the Oueme Valley (Phase II) (FAO)

Ethiopia
- Training of Secondary School Teachers of the Faculty of Education, Haile Selassie University, Addis Ababa (UNESCO)
- Management and Entrepreneurship Training and Advisory Centre, Addis Ababa (ILO)
- School for Animal Health Assistants, Debre Zeit (Phase II) (FAO)
- Development Planning (IBRD)

Gabon
- Mineral Exploration in Eastern Gabon (UN)

Ghana
- Management Development and Productivity Institute, Accra (ILO)
- Assistance to the Ghana Industrial Holding Corporation (UNIDO)

Guinea
- Forestry Training and Demonstration Centre (FAO)
- Development of Rice Cultivation (Phase II) (FAO)

Ivory Coast
- Forestry Training, Demonstration and Advisory Services (FAO)
- Assistance to the Geographic Institute of the Ivory Coast (UN)
- Programme of Educational Television (Phase II) (UNESCO)

/continued

Large-Scale Projects Completed (Continued)

ASIA AND THE FAR EAST (continued)

India
- Training and Advisory Services in Tool, Die and Mould Making for the Plastic and other Industries, Guindy, Madras (ILO)
- Mechanical Engineering Research and Development Organisation, Durgapur (UNESC
- Improvement of Milk Production in the Calcutta Area (FAO)
- Farm and Community Grain Storage Development (FAO)
- Post-Graduate Agricultural Education and Research (UNESCO)
- Sheep and Wool Development in Eight States (FAO)
- Assistance to the Survey of India for Pre-Investment Surveying, Mapping and Training (Phase II) (UN)

Indonesia
- Highway Assistance and Transport Co-ordination Study (IBRD)
- Offshore Exploration for Tin and Tin Ore Dressing Research (UN)
- Fisheries Development and Training (FAO)
- Forest Industry Development (FAO)

Iran
- Establishment of an Industrial Estate (UNIDO)
- Research Centre for Industrial and Trade Development (UNIDO)
- Work-Oriented Adult Literacy Pilot Project (UNIDO)
- Development of the Caspian Forests (FAO)
- Public Service Reform and Training (UN)
- Assistance in Strengthening the Export Promotion Centre (UNCTAD)

Khmer Republic
- Water Supply for Sihanoukville (WHO)

Malaysia
- Klang Valley Regional Planning and Development Study (IBRD)

Mongolia
- Polytechnic Institute, Ulan-Bator (UNESCO)
- National Industrial Vocational Training Scheme (ILO)

Nepal
- Development of Water Supply and Sewerage Greater Kathmandu and Bhaktapur (WH

New Caledonia
- Training of Mechanics for Marine Diesel Engines and Other Belated Equipment (IL

Pakistan
- Management Development and Industrial Training in West Pakistan (ILO)
- Strengthening of the West Pakistan Veterinary Research Institute, Lahore (FAO)

Philippines
- Meteorological Training and Research, Manila (WMO)
- Strengthening Agricultural Training at Central Luzon State University (UNESCO)
- Port Feasibility Studies (IBRD)

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Large-Scale Projects Completed (Continued)

ASIA AND THE FAR EAST (continued)

Republic of Korea
- Food Processing Centre, Seoul (FAO)
- Forestry Survey and Development (FAO)
- Central Vocational Training Institute (ILO)
- Ports Development Study (IBRD)
- Naktong River Basin Delta and Tributary Studies (FAO)

Republic of Vietnam
- National Technical Centre, Phu-tho (Saigon) (UNESCO)

Singapore
- Pig and Poultry Research and Training Institute Sembawang (FAO)
- Singapore Mass Transit Study (IBRD)

Sri Lanka
- Management Development and Productivity Centre, Colombo (ILO)
- National Vocational Training Scheme (ILO)

Thailand
- National Service for Technical Skill Promotion and Job-Entry Training for Industry (ILO)
- Promotion of Teaching Science and Technology (UNESCO)
- Thai Industrial Standards Institute (UNIDO)
- Regional Development Planning in Northern Thailand (Phase II) (UN)

Western Samoa
- Agricultural Development (FAO)

Regional Projects
- Fisheries Development Agency (FAO)

EUROPE, MEDITERRANEAN AND THE MIDDLE EAST

Algeria
- Natural Resource Surveys, Agricultural Experimentation and Demonstration in the Hodna Region, Central Algeria (FAO)
- Work-Oriented Adult Literacy Pilot Project (UNESCO)
- Forestry Development and Management (FAO)
- Ports Improvement and Development (UNCTAD)

Bulgaria
- Scientific Centre for Hygiene and Epidemiology (WHO)

Cyprus
- Higher Technical Institute, Cyprus (UNESCO)

Democratic Yemen
- Air Navigation and Aeronautical Meteorological Facilities, Aden (ICAO)
- Road Planning and Organisational Assistance to the Public Works Department (IBRD)

/continued

Large-Scale Projects Completed (Continued)

EUROPE, MEDITERRANEAN AND THE MIDDLE EAST (continued)

Egypt
- Vocational Training for the Egyptian Railways (ILO)
- Central Agricultural Pesticides Laboratory, Cairo, (FAO)
- Institute of Petroleum and Mining Engineering, Suez (UNESCO)
- Electric Power Training Institute, Cairo (ILO)
- Occupational Safety and Health Institute, Heliopolis (ILO)
- Animal Husbandry Research and Training, Sakha (FAO)

Greece
- Exploration for Uranium in Central and Eastern Macedonia and Thrace (IAEA)

Iceland
- Development of Industrial Exports (UNCTAD)

Iraq
- Building Research Centre, Baghdad (UN)
- Forestry Research, Demonstration and Training, Arbil (FAO)
- Educational Research Centre, Ministry of Higher Education and Scientific Research (UNESCO)

Israel
- National Science Teaching Centre (UNESCO)

Jordan
- Centre for Industrial Development (UNIDO)
- Phosphate Exploration and Beneficiation Studies (UN)

Kuwait
- Water Resources Centre, Kuwait City (UN)

Lebanon
- Hydro-Agricultural Development (FAO)

Libyan Arab Republic
- Industrial Vocational Training Scheme (ILO)

Morocco
- Water Supply Study (Phase II) (WHO)
- Feasibility Study for a Fish Protein Concentrate Plant (UNIDO)
- Assistance in Technical Manpower Studies and Related Training Programmes (ILO)

Qatar
- Hydro-Agricultural Resources Surveys (FAO)

Romania
- Polytechnic Institute, Bucharest (UNESCO)

Saudia Arabia
- Transport Survey (IBRD)

Spain
- National Centre for Educational Development and Research, Madrid (UNESCO)

/continued

Large-Scale Projects Completed (Continued)

EUROPE, MEDITERRANEAN AND THE MIDDLE EAST (continued)

Sudan
- National Vocational Training Scheme (ILO)
- Savanna Development (FAO)
- Work-Oriented Adult Literacy Project (UNESCO)
- Higher Teacher Training Institute, Omdurman (UNESCO)
- Food Processing Research Centre (Phase II) (FAO)

Syrian Arab Republic
- Training Programme for the Directorate of Bridges and Roads (ILO)
- Strengthening of the Tobacco Institute and Research Centre at Jub-Hassan "Lattakia" (FAO)

Tunisia
- National Centre for Industrial Studies, Tunis (UNIDO)
- Experiments and Demonstration on the Production of Selected Tree Crops, Forage and Livestock (FAO)
- Preservation of Historic Sites and Monuments in the Tunis-Carthage Region (UNESCO)

Turkey
- Research and Training Centres for the Production, Processing and Marketing of Fruit and Vegetables (FAO)
- Establishment of the Turkish Management Development Centre (ILO)
- Central Research and Training Institute for Hides, Skins and Leather, Istanbul (FAO)

Yemen
- Highlands Farm Development (FAO)
- Lowlands Farm Development (FAO)
- Farm Development of the Midlands (FAO)

LATIN AMERICA

Argentina
- Sheep Husbandry Research in Patagonia (FAO)
- Mineral Exploration in the Northwest Region (UN)

Bolivia
- Groundwater Development in the Altiplano (UN)
- Improvement of Agricultural Production in the Altiplano (FAO)
- Railway Reorganisation Study (IBRD)
- Integrated Health Services (WHO)
- Survey of the Mutun Iron Ore and Managanese Deposits (UN)

Chile
- Offshore Exploration for Petroleum (UN)
- Small Industries and Handicrafts (ILO)
- Complementary Advisory Services to "Agrarian Reform and Rural Development" (FAO)

/continued

Large-Scale Projects Completed (Continued)

LATIN AMERICA (continued)

Colombia
- Marine Fisheries Development Project (FAO)
- Middle Level Agricultural Education (UNESCO)
- Development and Diversification of Agricultural Production, Magdalena Area (FAO)
- The Training of Secondary School Teachers and Educational Specialists (University of Antioquia and the National Pedagogical University) (UNESCO)

Cuba
- Studies for the Establishment of Pilot Plants for Production of Newsprint and Dissolving Pulp from Bagasse, at Quivican (UNIDO)

Dominican Republic
- Animal Production and Veterinary Training, Autonomous University of Santo Domingo (FAO)

Ecuador
- Planning Zonal Programmes of Modernisation of Rural Life in the Andes (Phase I) (ILO)

El Salvador
- Watershed Protection and Agro-Forest Development in the Northern Zone (FAO)

Jamaica
- Assistance to the Survey Department of Jamaica (UN)
- Forestry Development and Watershed Management in the Upland Regions (FAO)
- Development and Management of Water Resources (FAO)
- National Youth Service Programme (ILO)

Mexico
- Training, Research and Extension in Animal Husbandry at the School of Agriculture (ITESM), Monterrey (FAO)
- Centre for Training Graduate Engineers and Professors of Engineering, Science and Technology (UNESCO)

Panama
- Improvement of Pastures and Fodder Crops (FAO)
- Communications and Load Dispatch Centre Study (IBRD)

Paraguay
- Investigation of Groundwater Resources in Central and Northwestern Chaco (UN)

Peru
- Urban Planning for the Reconstruction of Chimhote (UN)

Surinam
- Public Water Supplies and Sewerage (WHO)

Trinidad and Tobago
- Agriculture and Forestry Training at the Eastern Caribbean Farm Institute, Centeno (FAO)
- Centre for Management Development and Business Consultancy (Phase II) (ILO)

/continued

Large-Scale Projects Completed (Continued)

LATIN AMERICA (continued)

Venezuela

- Municipal Administration and Development (UN)

Regional Projects

- Expansion and Improvement of Hydrometeorological and Hydrological Services in the Central American Isthmus (WMO)
- Navigation Study of the Paraguay River South of Asuncion (UN)

INTERREGIONAL PROJECTS

- Tuberculosis Training Course (WHO)
- Frequency Search Unit (ICAO)
- Teletype Maintenance (ICAO)
- Aerodrome Engineering (ICAO)
- Aeronautical Training (ICAO)
- Higher Level Management Technical and Productivity Training (Phase II) (ILO)

GLOBAL PROJECTS

- Research and Training in the Development of High Lysine Maize (UNDP)

KEY:

UNDP	United Nations Development Programme
FAO	Food and Agricultural Organisation
IBRD	International Bank for Reconstruction and Development
ILO	International Labour Office
WHO	World Health Organisation
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNIDO	United Nations Industrial Development Organisation
WMO	World Meteorological Organisation
ITU	International Telecommunications Union
UNCTAD	United Nations Conference on Trade and Development
ICAO	International Civil Aviation Organisation

Peru

- Urban Planning for the Reconstruction of Chimbote (UN)

Surinam

- Public Water Supplies and Sewerage (WHO)

Trinidad and Tobago

- Agriculture and Forestry Training at the Eastern Caribbean Farm Institute, Centeno (FAO)
- Centre for Management Development and Business Consultancy (Phase II) (ILO)

(continued)

SECTION IIB

Large-Scale Projects Approved and Budgeted

AFRICA

Botswana
- National Health Institute (WHO)
- Rural Development (UN)

Burundi
- Tanganika Lake Fisheries Development (FAO)
- Burundi Technical Agricultural Institute (FAO)
- Meteorological Organisation and Staff Training (WHO)

Central African Republic
- Extension of Fisheries (FAO)
- Production and Control of Food and Oil Crop Seeds (FAO)
- Creation of Higher Education College (UNESCO)
- Extension of Agricultural Training (FAO)

Chad
- Cattle-raising Development (FAO)
- Creation of Industrial Promotion Office, Fort Lamy (UNIDO)

Congo
- Planning of Forestry Exploitation (FAO)

Dahomey
- Animal Traction and Meat Production (FAO)
- Agricultural Training (FAO)
- Educational Planning (UNESCO)
- Mining Exploration (UN)
- Development of Oueme Valley (Part 25) (FAO)

Equatorial Guinea
- Technical Assistance for Road Maintenance (IBRD)

Ethiopia
- Assistance to the Ministry of Land Reform and Administration (FAO)
- Strengthening of the Geological Survey (UN)
- Activation of the National Water Resources Commission (UN)

Gabon
- Assistance to TransGabon Railway Office (UN)
- Educational Reform and Renewal (UNESCO)

Gambia
- Survey of Basic Environmental Problems in the Bathurst and Kombo St Mary Area (WHO)
- Development of Insohre Fisheries (FAO)

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Large-Scale Projects Approved and Budgeted (Continued)

AFRICA (continued)

Ghana
- Management Development and Productivity Institute (ILO)
- Assistance to Ghana Industrial Holding Corporation Pharmaceutical Division Phase II (UNIDO)
- National Vocational Training Institute (ILO)

Guinea
- Administration and Financial Management of OFAB (IBRD)

Ivory Coast
- Reorganisation of Regional Technical Centres (ILO)
- Current Agricultural Statistics (FAO)
- Demonstration Training and Consultation in Forestry (FAO)

Lesotho
- Establishment of a National Teacher Training College (UNESCO)

Liberia
- Land Registration and Cadastral Survey Pilot Study (UN)

Malawi
- Water Resources Assessment of the Lake Malawi Catchment (WMO)
- Improvement of Livestock and Dairy Industry (FAO)
- Ground Follow-up to Airborne Geophysical Surveys in Four Selected Areas (Phase II) (UN)
- Pre-Investment Studies for a Woodpulp Industry, (FAO)

Mali
- Instructors and Monitors in Development of Agriculture (ILO)

Mauritania
- National Agronomic Experiment (FAO)

Mauritius
- Environmental and Occupational Health Training (WHO)

Nigeria
- Rural Employment Promotion in the Western State (ILO)
- Training of Operational Physical Planners (UN)
- National Telecommunications Development Planning (ITU)
- Advanced Teacher Training College (UNESCO)
- Long and Short Term Educational Development Plans (UNESCO)
- Savanna Forestry Research Station (FAO)
- Demonstration Tannery Maiduguri (FAO)

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Large-Scale Projects Approved and Budgeted (Continued)

AFRICA (continued)

Regional Projects (RAF)
- African Development Bank (UNDP)
- Statistical Training Programme-University of Botswana, Lesotho and Swaziland (UNESCO)
- Regional Training Centre for Preservation of the Cultural and Natural Heritage Jos (UNESCO)
- Science and Mathematics Teacher Training Programme of the University of Botswana, Lesotho, Swaziland (Phase II) (UNESCO)
- Onchocerciasis Control in the Volta River Basin Area Operational Research Field Investigations and Training Programme (WHO)
- Statistics Training Institute (YAOUNDE) (UN)
- Centre Regional Africain D'Administration Du Travail (Cradat) De Yaounde (Cameroun) (ILO)
- Research into the Control of Grain Eating Birds (QUELEA-QUELEA) (FAO)
- Agronomic Research and its Application to the Development of the Senegal River Basin (Phase II) (FAO)
- Integrated Programme of River Basin Development, Senegal (UNDP)

Rwanda
- Road Maintenance (IBRD)
- Horticultural Development (FAO)

Senegal
- Foundry Development Centre, Thies (UNIDO)
- Professional Rural Training (ILO)
- Study of Water Resources and Technical Assistance in Saniatation (WHO)

Sierra Leone
- Rokupr Rice Research Station (FAO)

Swaziland
- Vocational Training (ILO)
- Crop Production and Extension (FAO)

Togo
- Rural Development Programmes (FAO)
- Office National De Developpement Et Exploitation Des Forets (FAO)

Uganda
- Faculty of Technology (UNESCO)

United Republic of Cameroon
- Forest Industries Exploitation and Development (FAO)

United Republic of Tanzania
- Functional Literacy Curriculum Programmes and Materials Dev. (UNESCO)

Upper Volta
- Assistance to Centre of Polyvalent Agriculture, Matourkou (FAO)
- Experimental Centre for Rice and Other Irrigated Cultures (FAO)

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Large-Scale Projects Approved and Budgeted (Continued)

AFRICA (continued)

Zaire
- Establishment of Agricultural Documentation Centre (FAO)
- Industrial Standards and Quality Control (UNIDO)
- Training of Graduates and Building of Public Works Engineers (UNESCO)
- Agricultural Institute of Higher Training (UNESCO)

Zambia
- Small Scale Irrigated Horticulture Development (FAO)
- Assistance to the Development Planning Division (UN)
- Department of Census and Statistics (UN)

ASIA AND THE FAR EAST

Afghanistan
- Integrated Educational Development (UNESCO)
- Management Team-Industrial Development Bank (IBRD)

Bangladesh
- Immediate Assistance to the Department of Civil Aviation (ICAO)
- Assistance to the Bangladesh Road Transport Corporation (BRTC) (UNDP)

Bhutan
- Agriculture, Forestry and Fisheries (FAO)
- Royal Bhutan Polytechnic, Deo Thang Vocational Training (ILO)
- National Sheep and Yak Development Project (FAO)
- Don Bosco Technical School, Phunt Sholong, Vocational Training (ILO)

Burma
- Mineral Exploration (UN)
- Comprehensive Survey for Improvement of Navigational Channels in the Rangoon River (IBRD)
- National Vocational Training Programme (Phase II) (ILO)

India
- Farmers Training and Functional Literacy (FAO)
- Installation of a Computer System at the Tata Institute of Fundamental Research, Bombay (UNDP)
- Postgraduate Agricultural Education and Research (UNDP)

Indonesia
- Development of Central and Regional Occupational Health and Industrial Hygiene Laboratories (WHO)
- Training of X-Ray and Electro Medical Technician (WHO)
- Technical Teachers Training (ILO)
- Marine Fisheries Training (FAO)
- Fisheries Development and Management Project (FAO)
- Jakarta Sewerage Master Plan Including Preliminary Engineering and Feasibility Studies (WHO)
- Road Development in West Irian (UN)
- Forest Industry Development (FAO)
- Private Development Finance Company of Indonesia (IBRD)
- Transport Coordination and Planning Advisory Services (IBRD)

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Large-Scale Projects Approved and Budgeted (Continued)

ASIA AND THE FAR EAST (continued)

Iran
- Assistance in the Execution of the Varamin-Garmsar Development Plan (FAO)
- Teacher Training Technical and Vocational Education (UNESCO)
- Public Service Reform and Training (Phase II) (UN)
- Research Centre for Industrial and Trade Development (Phase II) (UNIDO)

Khmer Republic
- Civil Aviation (ICAO)
- Improvement of Rice Culture (FAO)

Malaysia
- Housing and Urban Development Advisers (UN)

Nepal
- National Parks and Wildlife Conservation (FAO)

Papua New Guinea
- Malaria Control Programme (WHO)

Philippines
- Meteorological Workshop Organisation and Instrument Maintenance (MANILA) (WHO)

Regional Projects (RAS)
- Regional Civil Aviation (ICAO)
- Asian Regional Development Support Communication Service (UNDP)
- Development Support Communication Service, West Asia (TEHERAN) (UNDP)
- Master Plan for the Development of Lumbini (UN)
- Asian Institute for Economic Development and Planning (Phase III) (UN)

Republic of Korea
- Meteorological Research and Training Institute (WMO)
- Fine Instruments Centre (UNIDO)

Republic of Vietnam
- Assistance to the National Corporation for the Development of Industrial Zones (SONADEZI) (UNIDO)
- Training of Higher Technicians (UNESCO)
- Rubber Production Development (FAO)
- Educational Analysis and Planning (UNESCO)
- Civil Aviation Development (ICAO)
- Agricultural Planning (FAO)
- Industrial Crops Development (FAO)
- Seed Production and Certification (FAO)

Sri Lanka
- Strengthening of the Institutions for Technical Training (UNESCO)
- Vector Control (WHO)
- National Institute of Management (ILO)

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Large-Scale Projects Approved and Budgeted (Continued)

ASIA AND THE FAR EAST (continued)

Thailand
- Establishment of Textile Industry Division (UNIDO)
- Integrated Forest Land Use in the Northern Highlands (FAO)
- Establishment and Operation of a Northern Region Agricultural Research Centre, Chiangmai, Thailand (FAO)
- National Service for Technical Skill Promotion and Job Entry Training for Industry (ILO)
- Thai Industrial Standards Institute (Phase II) (UNIDO)
- Strengthening of the Industrial Information and Documentation Unit, Ministry of Industry, Bangkok (UNIDO)
- Promotion of Science and Technology (UNESCO)

Western Samoa
- Upgrading of Development Planning in Western Samoa (UN)

EUROPE, MEDITERRANEAN AND THE MIDDLE EAST

Algeria
- Establishment of a National Policy for Housing and Construction (UN)

Bahrain
- Sewerage Disposal Scheme (WHO)

Bulgaria
- Shipbuilding Research and Design Institute in Varna (IMCO)

Democratic Yemen
- Pilot Demonstration for the Manufacture of Leather, Footwear and Other Leather Products (UNIDO)
- Co-operative Education and Training Centre (ILO)
- Industrial Adviser Unit (UNIDO)

Egypt
- Faculty of Science, Alexandria (UNESCO)
- Assessment of the Mineral Potential of the Asswan Region (Phase II) (UN)
- Engineering and Industrial Design Development Centre (UNIDO)

Hungary
- Development of Fish Culture Research (FAO)

Iraq
- Technical Training Institute, Basrah (UNESCO)
- Comprehensive Basic Health Services Training (WHO)
- Assistance in Development Planning and Execution (Phase II) (UN)
- Building Research Centre (UN)
- Public Administration Reforem and Development (UN)

Jordan
- National Vocational Training Scheme (ILO)
- Establishment of the Civil Aviation Training Unit (ICAO)
- Development of Meat and Milk Production (FAO)

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Large-Scale Projects Approved and Budgeted (Continued)

EUROPE, MEDITERRANEAN AND THE MIDDLE EAST (continued)

Lebanon
- Telecommunication Maintenance and On-the-Job Training (ITU)

Oman
- Opas Director of Telecommunication (ITU)
- Port Management and Operations (UNCTAD)

Poland
- Development Programme of Road Network System (UNDP)

Regional Projects (REM)
- Civil Aviation Training and Advisory Services (ICAO)

Romania
- Management Development Centre, Bucharest (PhaseII) (ILO)
- Plant Breeding and Seed Production, Fundulea (FAO)
- Polytechnic Institute-Bucharest (Phase II) (UNESCO)

Saudi Arabia
- Training in Civil Aviation (ICAO)
- National Transport Survey (Phase II) (IBRD)

Sudan
- National Vocational Training Scheme (Phase II) (ILO)
- Sudan Railways Operational Assistance Project (IBRD)
- Medical and Dental Education (WHO)
- Savanna Development Project (Phase II) (FAO)
- Strengthening the Civil Aviation Department (ICAO)
- Institute for Agricultural Technicians in the Southern Region (FAO)
- Youth Training and Social Development Centres (ILO)

Syrian Arab Republic
- Surveys of the Balikh Basin (FAO)
- Industrial Research and Development Centre (UNIDO)
- Assistance to the Textile Laboratories and Design Centre (UNIDO)
- Development of the Veterinary College, Hama (FAO)
- Assistance to the Faculty of Agriculture, University of Damascus (FAO)
- Technical Health Institute (WHO)

Tunisia
- Support and Expansion of the National Reforestation Research Institute (FAO)
- National Centre for Industrial Studies, Tunis (Phase II) (UNIDO)

Turkey
- Special Railway Studies (IBRD)
- Strengthening of Civil Aviation (ICAO)
- Strengthening of Textile Research Centre, Bursa (UNIDO)
- Exploration for Uranium in South-West Anatolia (IAEA)
- Promotion of Training and Programmes in Sanitary Engineering (WHO)

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Large-Scale Projects Approved and Budgeted (Continued)

EUROPE, MEDITERRANEAN AND THE MIDDLE EAST (continued)

Yemen
- Water Supply and Sewerage System for Sana'a ans Hodejda (WHO)
- Industrial Promotion and Advisory Unit (UNIDO)
- Air Safety-Airworthiness Inspector (ICAO)
- Civil Aviation Organisation and Administration (ICAO)
- Establishment of Agricultural Services and of a Central Research Organisation (FAO)
- Establishment of Agricultural Services in the Tihama Region (FAO)
- Director of Central Statistical Department (OPAS) Sana'a (UN)
- Development of Educational Programmes and Institutions (UNESCO)

Yugoslavia
- Computer Control of the Water Resources System of the Morava (UN)
- Complete Processing of Low Grade Ores from Macedonian Deposits (UNIDO)
- Institute of Earthquake Engr. and Engr. Seismology (UNESCO)

LATIN AMERICA

Argentina
- Mineral Exploration in Patagonia and Comahue (UN)
- Centre for Labour Relations (ILO)
- Mineral Exploration of the Northwest Region, (Phase II) (UN)

Barbados
- Organisation and Administration of National Standards Institution (UNIDO)

Bolivia
- Development of the Metal Mechanic Industry (UNIDO)

Brazil
- National Centre of Agricultural Documentation (FAO)
- Strengthening of the Brazilian Biomedical Information Network (WHO)
- Airworthiness Requirements in Brazilian Aviation (ICAO)

Chile
- Petroleum Exploration in Central and South Chile (UN)
- Expansion of the Technological Institute (INTEC) Polymers and Plastics (UNIDO)
- National Centre for Electronics and Telecommunications (ITU)

Colombia
- Base Metals Study in the Central and Western Mountain Ranges (UN)
- Emerald Prospection in the Provinces of Boyaca and Cundinamarca (UN)
- Evaluation of Nickel Laterities in Departments of Cordoba and Antioquia (UN)
- Precious Metals Project in the Atrato and San Juan River Basins (UN)
- Administrative Development of the Health Sector (WHO)
- Improvement in Health Information Systems (WHO)
- Administration and Planning of Education (UNESCO)
- Socio-Educational Research and Curricular Restructuring (UNESCO)
- Training and Upgrading of Teaching Personnel (UNESCO)

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Large-Scale Projects Approved and Budgeted (Continued)

LATIN AMERICA (continued)

Colombia (continued)
- Rural Development Centres (UNESCO)
- Technical Education (UNESCO)
- Training of teaching Personnel and Promotion of Research in Telecommunications (ITU)
- Planning and Administration (UNESCO)
- Universities-Faculties of Science (UNESCO)
- Strengthening of the Development of Scientific and Technological Policy (UNESCO)
- Faculty of Education (UNESCO)
- Advisory Services to Enterprises (ILO)
- Scientific and Technological Development (UNESCO)

Costa Rica
- Development of the Central American School of Geology (UNESCO)
- Mineral Investigation (UN)
- Educational Planning (UNESCO)

Cuba
- Development of Communication Services (ITU)

Dominican Republic
- Highway Rehabilitation, Maintenance and Administration Study (IBRD)
- Training and Demonstration in Animal Production (FAO)

Ecuador
- Strengthening of the Forestry Service (FAO)
- Industrial Exploitation of Forest Resources in the Northwest (IBRD)
- Assistance to the Publication Department of the Ministry of Foreign Affairs (UNESCO)
- Strengthening the Petroleum Sector (UN)
- Agricultural Planning, Programming and Marketing (FAO)
- Strengthening of the Health Sector (WHO)
- Ass. to the Ecuadorean Vocational Training Centre (Phase II) (SECAP) (ILO)

El Salvador
- Hydro-Meteorology (WMO)
- Civil Aviation (ICAO)
- Forestry Development and Watershed Management (FAO)

Guatemala
- Hydrometeorological Services (WMO)
- Groundwater Study (UN)
- Improvement of Sheep Production (FAO)

Haiti
- Mineral Survey (UN)
- Agricultural Development of the Trois Rivieres Area (FAO)
- Administration and Planning of Telecommunications (ITU)
- Feasibility Study of the Northern Highway in Haiti (IBRD)
- Agricultural Production in Southern Haiti (FAO)

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Large-Scale Projects Approved and Budgeted (Continued)

LATIN AMERICA (continued)

Honduras
- Civil Aeronautics (ICAO)
- National Development Plan (UN)

Jamaica
- Organisation and Operation of the Toolmakers Institute (UNIDO)
- National Literacy Programme (UNESCO)
- National Youth Development Programme (ILO)

Mexico
- Development of Vegetable Protein Programme (UNIDO)
- Environmental Improvement (WHO)
- Training of Government Programming Units (UN)
- Development of Beef Cattle in the State of Sinaloa (FAO)

Nicaragua
- Hydrological and Meteorological Services (WMO)
- Production of Basic Grains (FAO)

Paraguay
- Groundwater Development in the Chaco (UN)
- Teacher Training (UNESCO)

Peru
- Economic and Social Planning (UN).
- Planning of Human Resources (ILO)
- Development of Metal and Electrical Industries (UNIDO)
- Livestock Production Research and Extension in the Selva (FAO)
- Dairy Cattle Research and Extension in the Sierra (FAO)
- Assistance Housing Centre (PREVI) (UN)
- Development of the Orient General (UN)

Regional Projects (RLA)
- Water Resources of the Pilcomayo River Basin (IDB)
- Central American Transport System (IDB)
- Advanced Training in Meteorology in the Caribbean English Speaking Countries (WMO)
- Central American Institute of Telecommunications (INCATEL) (ITU)
- Expansion and Improvement of Hydrological and Meteorological Services (WMO)
- Aeronautical Training (ICAO)
- Aeronautical Telecommunication (ICAO)
- Flight Safety (ICAO)
- Assistance to the Inter-American Research and Documentation Centre on Vocational Training-Cinterflor (ILO)

Saint Kitts-Nevis-Anguilla
- Handicrafts Training, Production and Marketing Centres (ILO)

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Large-Scale Projects Approved and Budgeted (Continued)

LATIN AMERICA (continued)

Uruguay
- Strengthening of the Veterinary Research Centre (FAO)
- Institutional Organisation of Industrial Services (UNIDO)
- Industrial Technological Development (UNIDO)
- Telecommunications Training Centre (ITU)

Venezuela
- Reorganisation and Planning of Postal and telegraphic Services (UPU)
- Development of Continental Fisheries Resources (FAO)

INTERREGIONAL

- Training in Export Promotion (UNCTAD)
- Aeronautical Training at Civil Aviation Safety Centre, Beirut (ICAO)

Latin America: Projects Approved and Technical Cooperation

LATIN AMERICA (continued)

Uruguay

- Strengthening of the Veterinary Research Centre (IAEA)
- (UNIDO)
- Industrial Technological Development (UNIDO)
- Telecommunications Training Centre (ITU)

Venezuela

- Reorganization and Planning of Meteorological Services (WMO)
- Development of Continental Fisheries Resources (FAO)

MIDDLE EAST

- [illegible] Energy Production (UNIDO)
- Lebanon: Civil Aviation Safety Centre, Beirut (ICAO)

SECTION III

UN (FAO) ANALYSIS OF PRESENT

WORLD CASH-CROP SUPPLY/DEMAND PREDICAMENT

SECTION III

UN (FAO) ANALYSIS OF PRESENT WORLD CASH-CROP SUPPLY/DEMAND PREDICAMENT

1. Introduction - major market factors

Principal market factors have recently included major shortfalls or slow growth in world output (and, hence, exportable supplies) of most agricultural commodities, sharp increases in import demand, and decreases in stocks (in many cases to below the minimum levels required for normal contingencies) both in exporting and importing countries. The situation has been aggravated by coincidental shortfalls or slow growth of output relative to demand in a number of interrelated commodities, such as wheat and rice, and feedgrains, fish meal and some oilcakes. At the same time, a strong upturn in industrial activity, which began almost simultaneously in most industrialised countries, has created a situation in which not only agricultural raw materials markets experienced a marked boom, but also the prices of food and feed commodities in virtually all major industralised countries has risen at accelerating rates, further adding to the rise in consumer prices.

Poor prospects for supplies in the coming year, despite measures by many large producing countries to expand production, combined with continued high levels of demand for consumption and replenishment of depleted inventories, added to the general expectations of shortages, have thus accentuated speculative pressures and inventory buying in some of the commodities, and raised prices to very high levels.

Indications of Within-Year Price Instability

Commodity	1969	1970	1971	1972
Wheat (US Red Winter No. 2)	1.8	2.6	5.6	11.0
Maize (US Yellow No. 2-3)	2.1	3.6	4.3	7.3
Barley (Canada Feed No. 1-2)	...	7.1	10.8	11.3
Sorghum (US Milo No. 2)	4.4	4.9	4.4	10.7
Meat (England and Wales, fat cattle)	6.3	8.6	6.5	7.1
Meat (US beef steers all weights)	6.3	3.9	2.7	4.0
Butter (Danish salted, London exch.)	2.1	1.4	3.2	3.6
Soybean oil (any origin ex tank R ott.)	11.2	5.6	5.7	3.3
Cottonseed oil (US PBSY, cif, UK.)	4.5	6.9	8.4	4.1
Rapeseed oil (any origin, ex tank Rott.)	14.1	6.0	4.9	...
Linseed oil (Argentine and/or other d. bulk)	5.6	2.3	4.4	5.6
Sunflower oil (any origin ex tank Rott.)	14.9	8.4	5.2	6.3
Palm oil (Malayan 5% European ports)	11.1	6.1	5.6	5.6
Palm Kernel oil (Congo 6;8% Zaire 5% bulk)	9.3	4.5	5.8	4.8
Coconut oil (Sri Lanka 1% bulk)	8.0	5.9	2.9	...
Sugar (raw, spot N.Y. duty paid)	10.4	2.3	11.3	14.8
Bananas (I class tropical pack)	6.8	8.6	7.1	9.4
Pepper, black (spot NY)	17.0	6.6	5.3	4.4
Pepper, white (spot London)	18.3	9.2	4.8	8.0
Coffee (unwashed arabica Santos No. 4)	6.7	2.1	7.7	7.9
Coffee (Colombian mild arabica)	8.9	2.0	3.3	4.3
Cocoa (NY - 3 nearest futures)	3.2	9.0	6.0	2.5
Tea (London auctions, all tea)	8.3	3.8	2.2	3.5
Cotton (US Memphis 1-1/16")	1.1	0.7	1.8	5.7
Jute (BWD fob Chalna-Chittagong)	3.2	1.8	...	...
Sisal (East Africa UG)	-	3.9	5.7	5.6
Wool (UK dominions, clean basis)	3.2	4.6	4.6	10.7
Rubber (No. 1 RSS spot NY)	8.9	4.0	3.9	5.4

Notes: Measured for each year in turn by hundred times the coefficient of variation of the residuals from a linear trend fitted to 12 monthly observations. If the measure for a commodity increases from one year to another, this is indicative of growing instability.

Source: FAO.

2. Large shortfalls in world production

Production of most major agricultural commodities in 1972 either declined or fell short of the trend rate of growth over the sixties. These shortfalls represented a much larger proportion of world exports; since, for many commodities, exports constitute only a small fraction of world output. For instance, the 3.2 per cent fall in world cereal production in 1972 was equivalent approximately to 37 per cent of world cereal exports in 1971, while the 4 per cent decline in rice in 1972 exceeded the total world rice exports in 1971. The only crops showing increases higher than the trend rate of growth were some oil crops, tea, jute and cotton, all of which, except the last, experienced a reduction in price on average between 1971 and 1972.

The incidence of shortages was also georgraphically widespread. Declines in cereal output were especially large in eastern Europe, Asia and Far East and Latin America, including some of the world's largest producing and consuming countries such as the USSR, China, India, Indonesia, Philippines and Brazil. A severe drought also occurred in the Sahelian zone of western Africa. At the same time, output of cereals in North America and Oceania was lower, in part due to bad weather in Australia, but mainly due to policy measures to curb growth of acreage and output of cereals, especially wheat. These policies were adopted in 1969-70 after a period when output persistently exceeded demand and when stocks accumulated with the attendant problems of large government expenditures, disposals of surplus supplies by means of export aids and subsidies, the threat of disruption of world market from such disposals and the generally depressing effects of such stocks on world commodity markets. An important aspect of agricultural production since 1970 has been the wide year-to-year variations in the output of most commodities. For instance, world output of grains in 1970 was also below the trend rate of growth over the period 1961-69, but in 1971 aggregate output of wheat, oats and maize jumped to approximately three times the trend rate of growth. Output of rice in 1970 expanded faster than its average annual rate of growth over 1961-69, but in 1971 and again in 1972 it declined. Thus, in earlier years shortfalls in output of one cereal were partially compensated by abnormally large increases in the output of others; in 1972 world output of all the principal cereals declined.

While the output of pigmeat and poultry meat has been rising at more than the trend growth rate (which can be regarded approximately as the rate of growth of consumption as stocks do not form a significant element), that of beef and veal has been below this rate since 1970. Similarly, for all agricultural raw materials except cotton, world output since 1970 has either been declining or growing at rates below the trend rate of growth. The slow growth in raw materials output has been associated with virtually stagnant or slowly expanding demand and depressed prices, which has led in some cases to shifts away from the production of raw materials to more remunerative food and feed crops. Jute output varied considerably, mainly due to political upheavals in Bangladesh in 1971.

For cocoa, wine oilseeds and some other oil crops, and sugar, 1970 was a year of more than average annual rates of output growth. But 1971 was a year of generally lower supplies. Coffee output, after falling in 1970, rose markedly above the trend rate in 1971. For all these commodities 1972 saw extensive shortfalls in output.

Such large year-to-year changes in the levels of world output of most commodities indicate a high degree of variability of world agricultural production which appears to have influenced individual agricultural commodity markets significantly during the past 3-4 years. The variaibility, in a large measure, was due to vagaries of nature, despite recent advances in agricultural technology; but policy measures to encourage production after years of scarcity and curb it after those of excess supplies, together with the positive, but lagged, response of agricultural output to variations in prices of individual commodities, would appear to have aggravated the situation.

World[a] Production of Selected Agricultural Commodities
Average Annual Rates of Growth 1962 to 1968[b] and Annual Changes 1969 to 1972
(per cent)

	Annual average rate of growth	Annual % change		
	1962 to 1968[b]	1969 to 1970	1970 to 1971	1971 to 1972
Wheat	+4.6	+ 1.0	+11.0	- 3.4
Barley	+5.4	+ 1.7	+ 8.3	- 0.5
Maize	+3.5	- 1.4	+17.0	- 1.0
Rice	+3.0	+ 4.5	- 0.7	- 4.0
Fats and oils	+2.8	+ 3.8	+ 5.7	+ 1.7
Vegetable oilcakes[c]	+4.5	+ 4.5	+ 4.1	+ 4.8
Fish meal[c]	+9.1	+14.5	- 2.3	-22.0
Meat[d]	+3.7	+ 6.0	+ 3.4	+ 1.7
Beef & veal	+3.6	+ 1.9	+ 1.7	+ 0.9
Pork & poultry meat	+4.1	+ 8.9	+ 5.8	+ 2.2
Sugar	+4.1	+10.1	+ 0.9	- 0.7
Coffee	-0.7	- 8.6	+32.0	- 5.8
Cocoa	+2.0	+ 8.5	+ 1.9	- 6.4
Tea	+3.1	+ 2.4	+ 1.6	+ 4.6
Wine	+1.7	+ 8.6	- 4.3	- 3.8
Tobacco	+3.2	+ 1.3	- 2.4	2.0
Cotton	+1.1	+ 4.1	+ 4.5	+ 7.2
Jute	-0.4	- 2.7	- 9.3	+ 7.7
Sisal & other agaves	-0.1	+ 3.8	- 4.9	- 1.3
Wool	+1.3	- 1.8	- 1.1	- 0.4
Rubber (natural)	+4.4	+ 1.4	+ 2.0	+ 1.7

a Including China. b 1961-63 and 1967-69 averages. c In protein equivalent. d Beef and veal, pork, poultry meat, mutton and lamb (indigenous production), horse meat and other meat.

Source: FAO

3. Sharp rise in import demand

The reduced crops led to sharp increases in world import demand for most agricultural commodities, as reflected in the massive purchases of grains, soybeans, and sugar by the USSR and of agricultural raw materials by China toward the end of the year. At the same time, acceleration of industrial activity, leading to rising levels of employment, higher consumer demand, and growing inflation also boosted import demand for agricultural raw materials and highly income-elastic foods. Moreover, possibilities of substituting commodities in short supply by others were limited because of general shortages, and price increases in one commodity market were consequently transmitted to others.

The severity of the pressures of demand is indicated in the Table where annual increases in exports of the major agricultural commodities from 1969 to 1972 are compared with the annual average trend growth rates of exports over the period 1961-69. The most notable differences between the trend growth rate and export growth in 1972 were in wheat and coarse grains (mainly due to purchases by USSR), beef and veal (due to imports into the United States, EEC and Japan), coffee, cocoa, wine, tobacco and all fibres, except wool for which import demand rose only in the latter half of 1972. Exports of oilcakes and meals, and oils and fats, were close to their trend rates of growth. Exports of rice fell very much short of the trend rate of growth because opening stocks were already low and output declined further in 1972. On the whole, exports of most commodities over the past three years were higher than during the sixties, while increases in agricultural output, both due to natural setbacks and supply management policies of some major producing countries, have been smaller.

4. Decline in carryover stocks

Another significant factor in 1972, which also affects the outlook in 1973-74 and in the medium-term future to some extent, was the decline in world carryover stocks of most commodities. With shortfalls in current output rising consumption and import requirements could be met only by drawing down stocks in both producing and consuming countries. In some cases, the level of stocks at the end of the 1972/73 season will be dangerously low, and supplies in 1973/74 will be critically dependent on 1973 crops.

On the basis of such data as are available to FAO, changes in stock levels of various commodities are shown in the specific Table. It is noticeable that, except for butter and skim milk powder, new surpluses of which accumulated in the EEC, and cotton, in which there was a slight increase of stock levels mainly in importing countries, closing stocks in 1972 were significantly reduced, and in some cases almost depleted. World stocks of cereals and cocoa were significantly reduced, and in some cases almost depleted. World stocks of cereals and cocoa were substantially lower and those of sugar, tea, coffee, tobacco and natural rubber fell moderately. With the main exception of rice and milk products, the levels of most stocks were substantially below the average levels attained in 1961-65. For several commodities, such as cereals and coffee, stocks were considerably above the average volume of annual exports during the early sixties, but by 1972 these levels had fallen significantly below the average volume of exports in 1970-72.

5. The immediate outlook

The short-term outlook for 1973/74 points to continuing shortages and high prices in the main commodity markets. In view of depleted inventories, both in exporting and importing countries, supplies will be critically dependent on 1973 output, particularly of grains, rice, oils, oilcakes and sugar. With little possibility of further supplies coming from stocks, prices will be strongly influenced by expectations about current and future production. On present indications, world production of most commodities should increase, but consumption demand, due to rising incomes, is likely to remain strong and the value of world trade may again rise substantially.

Prices in general will average higher, partly due to the increases which have taken place in the first five months of 1973. Shortages may persist for some commodities even during 1974.

Volume of World[a] Exports of Selected Commodities: Average Annual Rate of Growth 1962 to 1968[b] and Annual per cent changes 1969 to 1972

(per cent)

	Annual average rate of growth	Annual % change		
	1962 to 1968	1969 to 1970	1970 to 1971	1971 to 1972
Wheat	+ 0.7	+ 6.6	- 1.1	+26.8
Coarse grains[c]	+ 5.1	+15.0	+10.8	+11.6
Barley	+ 1.9	+23.4	+28.0	-12.4
Maize	+ 6.7	+ 3.2	+14.3	+19.0
Rice[d]	+ 8.9	+10.7	+ 6.9	- 5.2
Oils and fats	+ 4.7	+11.9	+ 6.3	+ 3.9
Oilcakes and meals excl. fish meal)	+ 7.0	+20.2	+ 3.4	+ 6.1
Fish meal	+12.0	+ 0.3	- 0.3	- 3.3
Meat[c]	+ 4.5	+ 7.7	+ 3.3	+ 6.8
Beef and veal	+ 4.1	+ 7.3	- 2.6	+15.6
Mutton and lamb	+ 4.2	+ 6.4	+ 1.1	- 0.1
Pork and poultry meat	+ 6.5	+18.2	+23.7	+ 4.9
Sugar	+ 0.9	+17.5	- 3.4	+ 0.8
Coffee [f]	+ 2.2	- 4.1	+ 1.3	+ 8.1
Cocoa[d]	+ 0.5	+19.7	+ 5.3	+ 6.0
Tea	+ 1.2	+10.9	+ 3.7	+ 2.3
Wine	+ 0.2	+12.7	- 7.7	+23.4
Tobacco	+ 2.0	- 0.5	+ 5.7	+15.5
Cotton	+ 1.0	+10.9	- 3.1	+ 3.4
Jute	+ 1.1	-27.9	+10.3	+ 3.7
Sisal and other agaves[d]	- 2.3	+11.2	-14.1	+ 0.7
Wool	+ 0.7	- 7.8	- 1.1	- 0.2
Rubber[d] (natural)	+ 4.2	- 4.0	+ 1.6	- 1.7

a Including China. b 1961-63 and 1967-69 Averages. c Rye, barley, oats, maize, sorghum and other small grains. d Excluding re-exports. e Excluding centrally planned countries in Asia. f Green coffee.

Source: FAO.

World wheat production is expected to be significantly more in 1973/74 as a result of high prices and policy measures taken by governments to expand output. But exportable supplies will be smaller relative to import demand. The coarse grain situation in 1973/74 will be crucially dependent on the United States maize crop in 1973. Continuing demand from the USSR, China and India, and the low levels of carryover stocks in the exporting countries, indicate that the volume of trade and levels of prices will remain high. For rice, supplies are already very tight in 1973.

Production of fats and oils in 1973 is expected to grow moderately, with the increases likely to be concentrated in the major exporting countries. Growth in output and trade is envisaged for soybeans, cottonseed and palm oils, but production of nearly all other vegetable oils and fish oil is expected to be lower, and prices should average somewhat higher. Butter and lard output should increase further in 1973. Although output of oilcakes is expected to rise somewhat in 1973, supplies will remain scarce at least until late in the year and demand for feed, despite high prices, will continue to rise with the expansion of meat and milk production. With the numbers of dairy cows likely to rise, the world dairy market faces growing surpluses. Supplies of milk products, particularly butter, should remain ample and prices are likely to weaken while stocks of butter and skim milk powder in the EEC, the world's major producing and consuming region, are expected to rise further.

Meat supplies should increase in 1973, but further demand increases due to rapidly rising incomes in most industrialised countries, suggest that market prices may not decline significantly. World beef output in 1973 should rise more than in 1972 and supplies are likely to increase further in 1974. Output of mutton and lamb is expected to be somewhat smaller. Prospects are good for higher output of pigmeat and poultry meat, but growth may slow down as feed costs are beginning to narrow producers' margins.

Output of sugar is estimated to have increased in 1972/73 but to have fallen short of consumption. Hence, carryover stocks will fall again so that, unless 1973/74 crops are unusually large, prices are likely to remain high. Sustained increases in production will be necessary to replenish stocks and to meet increasing world requirements for sugar.

The outlook for citrus fruit and bananas points to an increase in supplies exceeding growth in demand. Grapefruit and lemons have enjoyed relatively firm markets and this situation is likely to continue in 1973/74. Output of tropical beverages and wine is likely to decline in the 1973/74 season. With import demand rising, world prices should remain firm except for tea, production of which is again likely to exceed impor requirements.

The short-term outlook for agricultural raw materials remains generally firm. With industrial activity expected to remain at a high level in most, industrialised countrie throughout 1973 and stocks in consuming countries having been reduced, import demand for rubber should be strong in 1973 and prices firm. The value of trade should recover from the depressed levels of 1972. Demand for cotton is also likely to be strong, with substantial restocking in importing countries. As supplies are unlikely to expand much, prices may well continue their upward movement. Output of jute may rise in 1973/74 and, with higher carryover stocks at the beginning of the season, prices could be more competitive. Production of sisal and henequen should also go up in 1973, and, with import requirements estimated to be lower, prices will probably be down from the levels of 1972. Production and exports of abaca are likely to be higher and those of coir fibre should remain about the same as in 1972.

The forest products market is expected to remain buoyant throughout 1973, owing t expanding economic activity in most industrialised countries, low current stock levels and restrictions on felling.

Other developments which will have important repercussions on world agricultural commodity trade in the future include the continuing disturbances in the world monetary system.

Changes in Closing Stocks of Principal Agricultural Commodities, 1961 to 1965 and 1970 to 1972

Commodity	Unit (Ton)	Stock level 1961-65 average	1970	1971	1972	% change 1971 to 1972 (%)	1961-65 stock level as % of world trade in the same period (%)	1972 stock level as % of world trade during 1970-72 period (%)
Wheat[a]	mill.	46.9	48.3	47.6	26.8	- 43.7	90	44
Coarse grains[b]	mill.	65.8	45.2	62.4	47.9	- 23.2	195	79
Rice[c]	mill.	4.7	13.1	9.5	6.9	- 27.1	70	93
Butter[d]	1000	345	367	304	551	+ 81.3	57	77
Skim milk powder[e]	1000	...	310	182	382	+109.9	...	36
Sugar	mill.	14.1	19.0	16.6	15.7	- 5.4	75	72
Coffee[f]	mill.	4.2	3.5	2.9	2.7	- 6.0	152	84
Cocoa	1000	621	499	530	402	- 24.2	57	34
Tea[g]	1000	184	189	171	153	- 10.5	32	23
Tobacco[h]	1000	2,378	2,251	2,215	2,094	- 5.5	259	202
Cotton	1000	5,106	4,725	4,254	4,371	+ 2.8	140	110
Jute[i]	1000	744	702	615	443	- 28.0	77	59
Wool[j]	1000	55	101	130	74	- 43.1	6	8
Rubber	1000	1,084	1,570	1,536	1,473	- 4.1	52	52

a Argentina, Australia, Canada, EEC (original members), United States. b Argentina, Australia, Canada, EEC (original members), South Africa, United States. c Khmer Republic, Pakistan, Thailand, Japan. d 15 selected countries. e 10 selected countries. f Producing countries only. g United Kingdom, India, Sri Lanka. h United States, Canada, Greece, United Kingdom. i India, Bangladesh, Thailand. j Australia, New Zealand, South Africa, Argentina, Uruguay, United Kingdom.

With effect from March 1973, the major currencies have been floating against one another while work on the future shape of the international monetary system has been in progress in the Committee of Twenty of the International Monetary Fund. The introduction of floating exchange rates is a major change which has made the working of agricultural markets quite complex. Changes in exchange rates will affect the relative competitiveness of agricultural exports of various countries and thus influence the patterns of trade. Uncertainty over the future and speculative pressures caused by monetary instability will also continue to have some effect on agricultural commodity prices.

The accession of Denmark, Ireland and the United Kingdom to the EEC, which came into effect on 1 January 1973, is not expected to have had much impact on the levels of production and consumption in 1973, except that the rapid expansion of cattle herds in the new member countries in 1972/73 was to a large extent due to the anticipation of higher EEC prices. While this build-up was reflected in a temporary reduction of slaughterings, milk output was up significantly. The effects should begin to show more strongly in the coming years as prices in the new member countries of products subject to the common agricultural policy are adjusted to the levels of the Community, and as tariffs are brought into line with the EEC common external tariff. It is also likely that some redirection of trade flows will occur as a consequence of the enlargement of the Community, though current price levels, changing exchange rates and new policy measures to allow larger imports of, for example, beef into the EEC will influence the pattern of trade this year.

Non member countries, and even more the non-associable countries, will be faced with the problems of adjusting their agriculture to the new situation, although the severity of the problem will vary according to the commodity composition of their trade, and the arrangements which these countries have made and can make with the EEC. For instance, although provision has been made for continuing imports of sugar by the United Kingdom in 1973 and 1974 under the Commonwealth agreement, problems of refining margins and of long-term access to the enlarged Community for the sugar exports of the developing Commonwealth exporters are still to be resolved.

Arrangements have also been concluded between the EEC and several of the remaining countries of EFTA providing for the progressive reduction of customs duties and, in principle, for free trade in industrial goods between these countries and the EEC as from 1 July 1977. With a few exceptions, these agreements do not provide for free trade in unprocessed agricultural commodities, whereas for the processed products all protective duties on the value added in their manufacture should be eliminated on the same date as for industrial products. Where applicable, protection on the basic agricultural input of these processed agricultural products is to remain unchanged.

The Community has also entered into agreements with some countries of the Mediterranean area under which exports from those countries will be accorded preferential treatment in EEC markets. At the time of writing, the Ministers of Agriculture of the nine EEC member countries had agreed, inter alia, on a number of measures to facilitate imports into the Community from Mediterranean countries of a number of agricultural products including wine and processed and fresh fruits and vegetables.

FIRST EVALUATION OF PROJECT AREA: OVERVIEW OF RELEVANT ASPECTS

Political Country of location and continent

Geography. Whether landlocked

Size of project area in km^2

Minimum number of sounding rockets for total coverage

Meteorology. Climatic zones

Summer/ Winter	No summer	Very cool summer	Cool summer	Full summer
No winter				
Mild winter				
Cold winter				

Seasonal temperature range:

Type	Range (^{o}C)
Oceanic	less than 12
Sub-continental	12-24
Continental	24-36
Very continental	36-48
Extremely continental	more than 48

Duration of wet and dry seasons:

Type	Months with over 50 mm precipitation
All months rainy	12
Rainy season predominant	8-11
Rainy and dry seasons approximately equal	5-7
Dry season predominant	1-4

Month by month precipitation:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
mm.												

Resource production

Rural land use and vegetation types

I. Agriculture. Arable and mixed farming; grazing land; rice land; other irrigated land; coniferous forest; coniferous/deciduous forest; deciduous forest; equatorial forest; tropical woodland and grassland; marsh or bog; sand desert; other desert; high altitude wasteland, tundra, and ice cap.

Principal crops

Crop	Approx. production (t)	Approx. area (km^2)	Approx. marketed prod (t)	Growing seasons
Crop A				
Crop B				
Crop C				
etc.				

Local survey capabilities

Crops surveyed

Means of execution

Duration and timing

Cost

Anticipated error

II. Fisheries and wildlife. Principal wildlife species. Existence of nutrients. Sources of pollution.

III. Mineral resources. Production and export of minerals; existence of processing centres and ports; means of transport; local geological mapping capabilities.

IV. Water resources. Principal water sources; demand requirements; density of streamgauges; flood records.

V. Mapping services. Local capabilities in topographic and land-use mapping.

Economic considerations

Types of rural economy

Nomadic herding
Hunting, gathering, fishing, and primitive cultivation
Commercial forestry
Shifting and marginal cultivation
Extensive grazing and stock raising
Subsistence agriculture: rice dominant
Subsistence agriculture: rice unimportant
Subsistence agriculture: mixed crop and livestock
Commercial agriculture: plantation crops
Commercial agriculture: horticulture
Dairy farming
Mediterranean agriculture

Demography. Size of population dependent on project area resources agricultural production; fisheries production; wildlife production; forestry production; mineral production; water resources.

Distribution of population: by region; by rural/urban.

External trade. Size and value of exports/imports in recent years of:

Crops

Fish

Wildlife

Timber

Minerals

Existing statistics, documentation and previous studies:

Politics

Geography

Meteorology

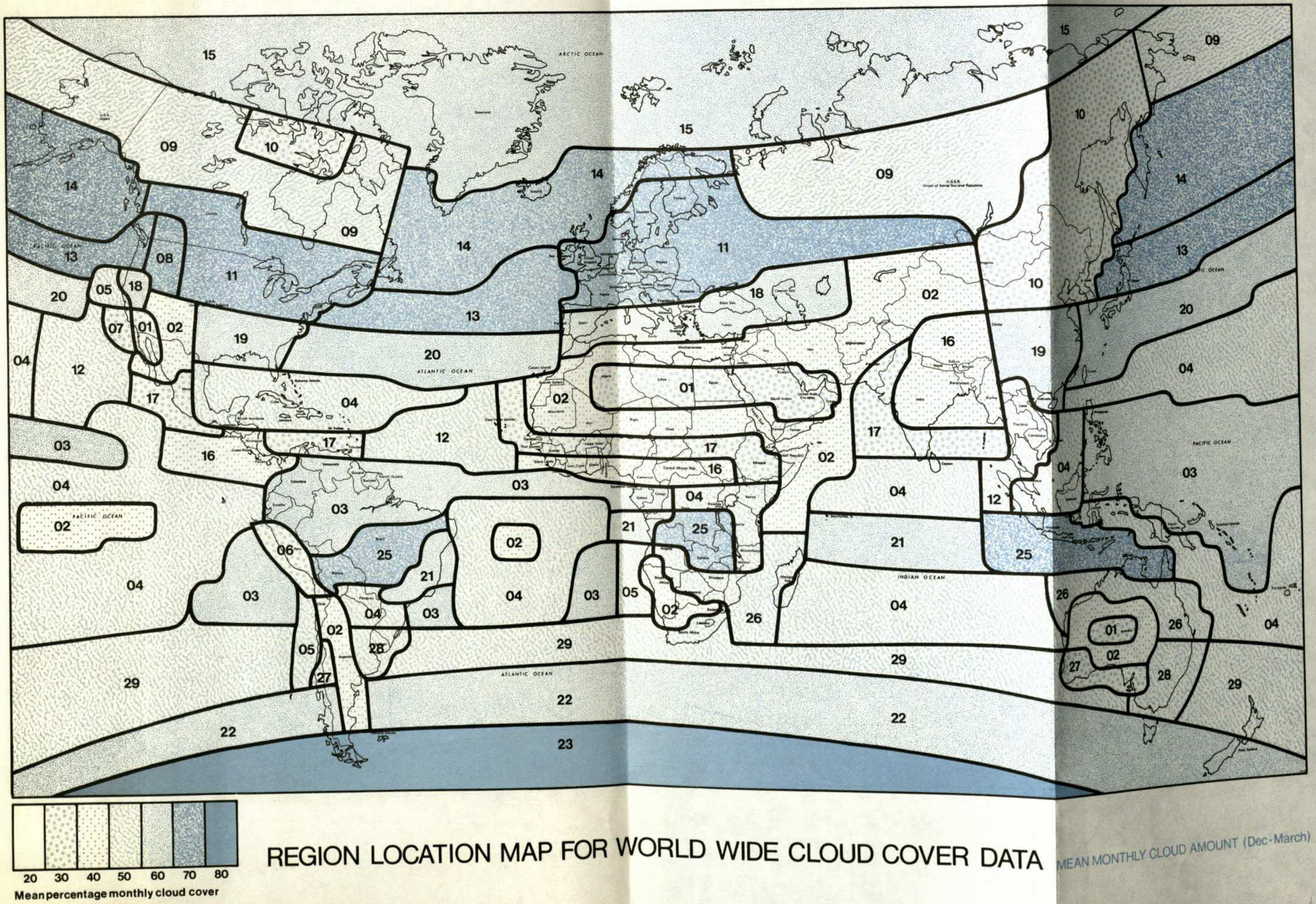
Resources: production, trade

Demography

Regional development studies.

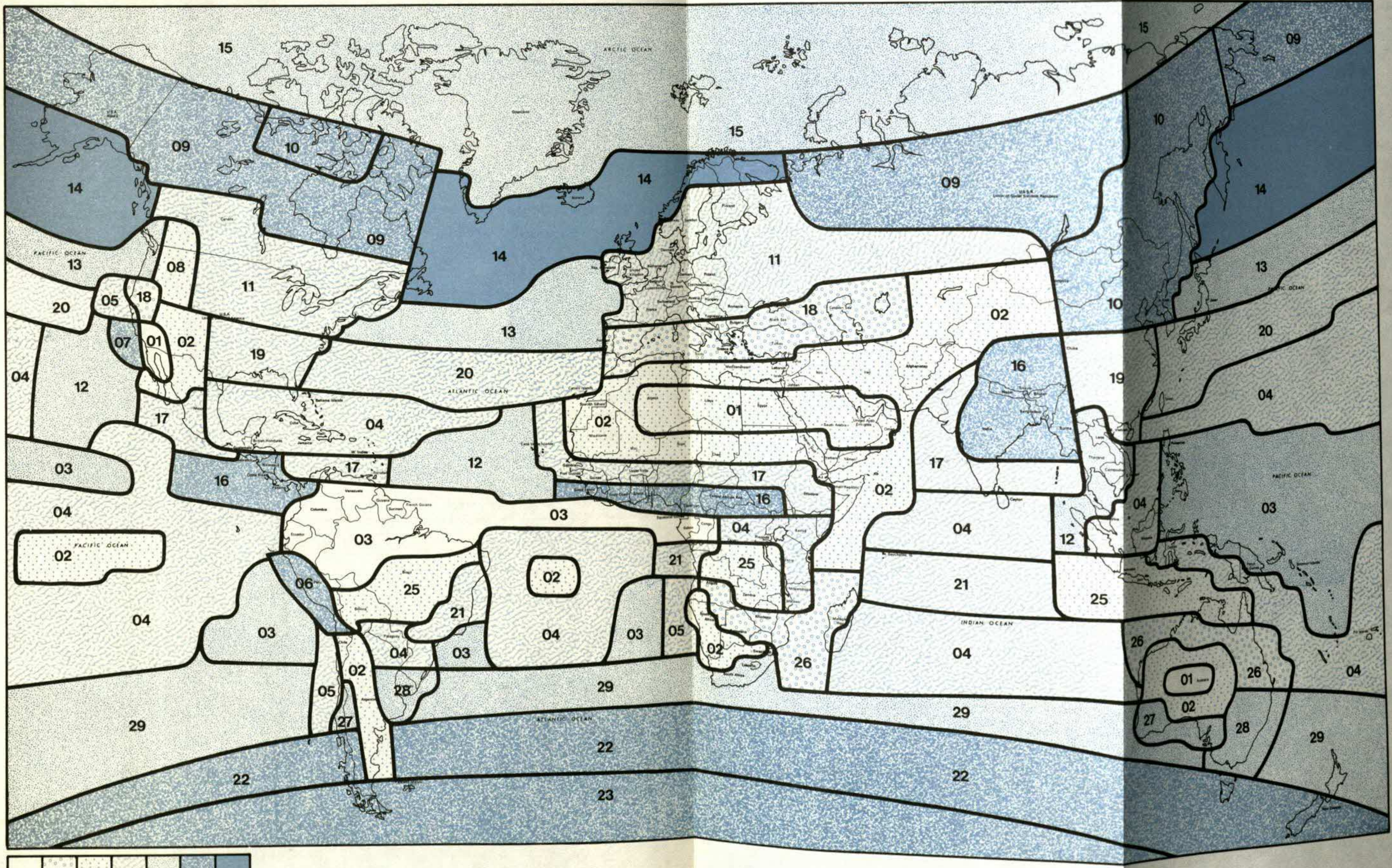
IV CLOUD COVER INFORMATION

CONTENTS



REGION LOCATION MAP FOR WORLD WIDE CLOUD COVER DATA

MEAN MONTHLY CLOUD AMOUNT (Dec-March)



20 30 40 50 60 70 80

Mean percentage monthly cloud cover

REGION LOCATION MAP FOR WORLD WIDE CLOUD COVER DATA

MEAN MONTHLY CLOUD AMOUNT (June-August)

General Description of Climatological Regions (Continued)

Region number	General description	Location	Seasonal change in cloud amount	Mean monthly cloud amount June-August (in per cent)	Mean monthly cloud amount December-March (in per cent)	Predominant cloud type	Diurnal variation in cloud amount	Hour of maximum cloud amount (local time)
16	Tropical - Seasonal Change	North of Region 03	Extreme	70	40	Convective	Large	1600
17	Tropical - Clear Winter	Northern Hemisphere near Region 16	Moderate	50	30	Convective	Large	1600
18	Mediterranean	Northern Hemisphere, Europe, Western North America	Extreme	30	-	Convective	Small	-
19	Sub-Tropical	Northern	Moderate	50	-	Convective	Large	1600
		Hemisphere 30N		-	60	Synoptic Scale	Small	-
20	Sub-Tropical - Ocean	Northern	Moderate	50	-	Convective	Small	-
		Hemisphere 30N		-	60	Synoptic Scale	Small	-
21	Tropical - Cloudy Summer	South of Region 03	Moderate	50	60	Convective	Large	1600
22	Mid Latitude Ocean	Southern Hemisphere	Moderate	70	60	Synoptic Scale	Small	-
23	High Latitude - Ocean	Southern Hemisphere	Moderate	70	80	Synoptic Scale	Small	-
24	Polar	Southern Hemisphere	Small	60	60	Synoptic Scale	Small	-
25	Tropical - Seasonal Change	South of Region 03	Extreme	40	70	Convective	Large	1600
26	Tropical - Clear Winter	South of Region 25 Africa, Australia	Moderate	30	50	Convective	Large	1600
27	Mediterranean	Southern Hemisphere	Extreme	-	30	Convective	Small	-
		Australia, Chile		60	-	Synoptic Scale	Small	-
28	Sub-Tropical Land	Southern	Moderate	-	50	Convective	Large	1600
		Hemisphere 30S		60	-	Synoptic Scale	Small	-
29	Sub-Tropical Ocean	Southern	Moderate	-	50	Convective	Small	-
		30S		60	-	Synoptic Scale	Small	-

Source: Ref: 11.

General Description of Climatological Regions (Continued)

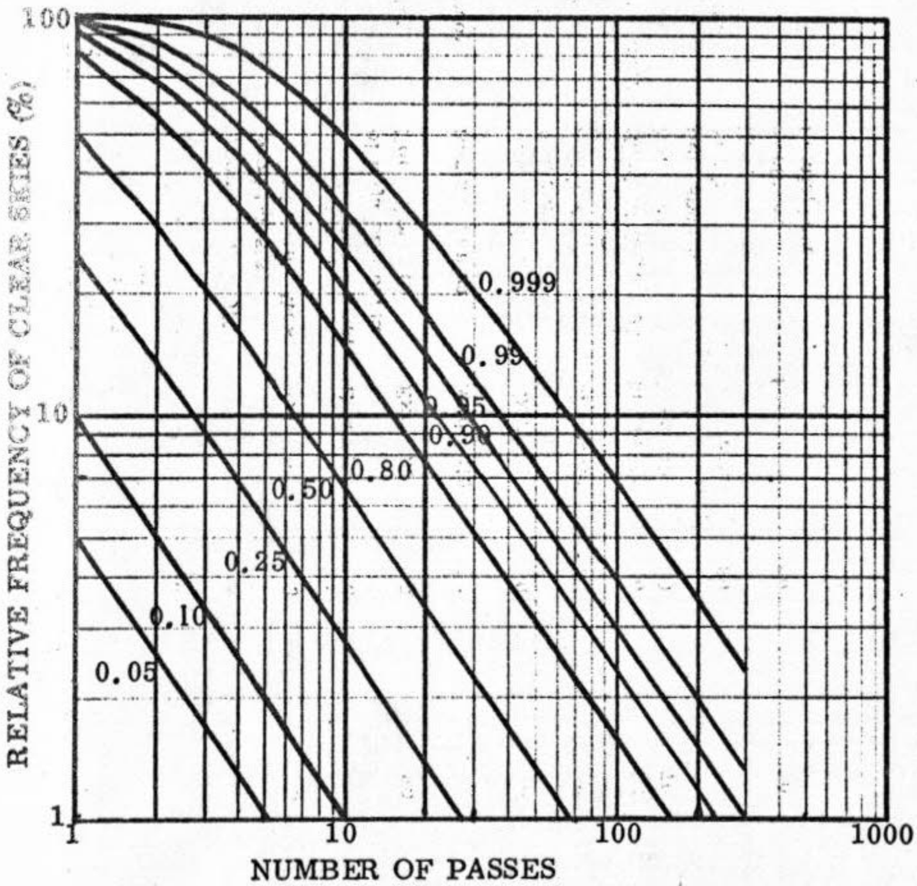
Region number	General description	Location	Seasonal change in cloud amount	Mean monthly cloud amount June-August (in per cent)	Mean monthly cloud amount December-March (in per cent)	Predominant cloud type	Diurnal variation in cloud amount	Hour of maximum cloud amount (local time)
16	Tropical - Seasonal Change	North of Region 03	Extreme	70	40	Convective	Large	1600
17	Tropical - Clear Winter	Northern Hemisphere near Region 16	Moderate	50	30	Convective	Large	1600
18	Mediterranean	Northern Hemisphere, Europe, Western North America	Extreme	30	-	Convective	Small	-
19	Sub-Tropical	Northern	Moderate	50	-	Convective	Large	1600
		Hemisphere 30N		-	60	Synoptic Scale	Small	-
20	Sub-Tropical - Ocean	Northern	Moderate	50	-	Convective	Small	-
		Hemisphere 30N		-	60	Synoptic Scale	Small	-
21	Tropical - Cloudy Summer	South of Region 03	Moderate	50	60	Convective	Large	1600
22	Mid Latitude Ocean	Southern Hemisphere	Moderate	70	60	Synoptic Scale	Small	-
23	High Latitude - Ocean	Southern Hemisphere	Moderate	70	80	Synoptic Scale	Small	-
24	Polar	Southern Hemisphere	Small	60	60	Synoptic Scale	Small	-
25	Tropical - Seasonal Change	South of Region 03	Extreme	40	70	Convective	Large	1600
26	Tropical - Clear Winter	South of Region 25 Africa, Australia	Moderate	30	50	Convective	Large	1600
27	Mediterranean	Southern Hemisphere	Extreme	-	30	Convective	Small	-
		Australia, Chile		60	-	Synoptic Scale	Small	-
28	Sub-Tropical Land	Southern	Moderate	-	50	Convective	Large	1600
		Hemisphere 30S		60	-	Synoptic Scale	Small	-
29	Sub-Tropical Ocean	Southern	Moderate	-	50	Convective	Small	-
		30S		60	-	Synoptic Scale	Small	-

Source: Ref: 11.

General Description of Climatological Regions

Region number	General description	Location	Seasonal change in cloud amount	Mean monthly cloud amount June-August (in per cent)	Mean monthly cloud amount December-March (in per cent)	Predominant cloud type	Diurnal variation in cloud amount	Hour of maximum cloud amount (local time)
01	Essentially Clear	Major Desert Area	Small	20	20	-	Small	-
02	Little Cloudiness	Sub-Desert Areas	Small	40	40	-	Small	-
03	Tropical Cloudy	Near Equator	Small	60	60	Convective	Large	1600
04	Tropical Moderate Cloudiness	North or South of Region 03	Small	50	50	Convective	Large	1600
05	Desert Marine	Over Ocean - Off West Coasts	Small	50	50	Stratiform	Large	0800
06	Desert Marine Cloudy Winter	Over Ocean - West of Peru	Extreme	70	30	Stratiform	Large	0800
07	Desert Marine Cloudy Summer	Over Ocean - West of Baja California	Extreme	70	30	Stratiform	Large	0800
08	Mid Latitude - Clear Summer	North America	Extreme	40	70	Synoptic Scale	Small	-
09	High Latitude - Cloudy Summer	North America Asia	Moderate	70	50	Synoptic Scale	Small	-
10	High Latitude - Clear Winter	Asia, North America	Extreme	70	30	Synoptic Scale	Small	-
11	Mid Latitude - Land	Northern Hemisphere	Moderate	50	70	Synoptic Scale	Small	-
12	Tropical - Cloudy Summer	North of Region 03	Moderate	60	50	Convective	Large	1600
13	Mid Latitude - Ocean	Northern Hemisphere	Moderate	60	70	Synoptic Scale	Small	-
14	High Latitude - Ocean	Northern Hemisphere	Moderate	80	70	Synoptic Scale	Small	-
15	Polar	Northern Hemisphere	Small	60	60	Synoptic Scale	Small	-

NOMAGRAM OF PROBABILITIES OF CLEAR VIEW IN SINGLE PASS OF SATELLITE



SOURCE:

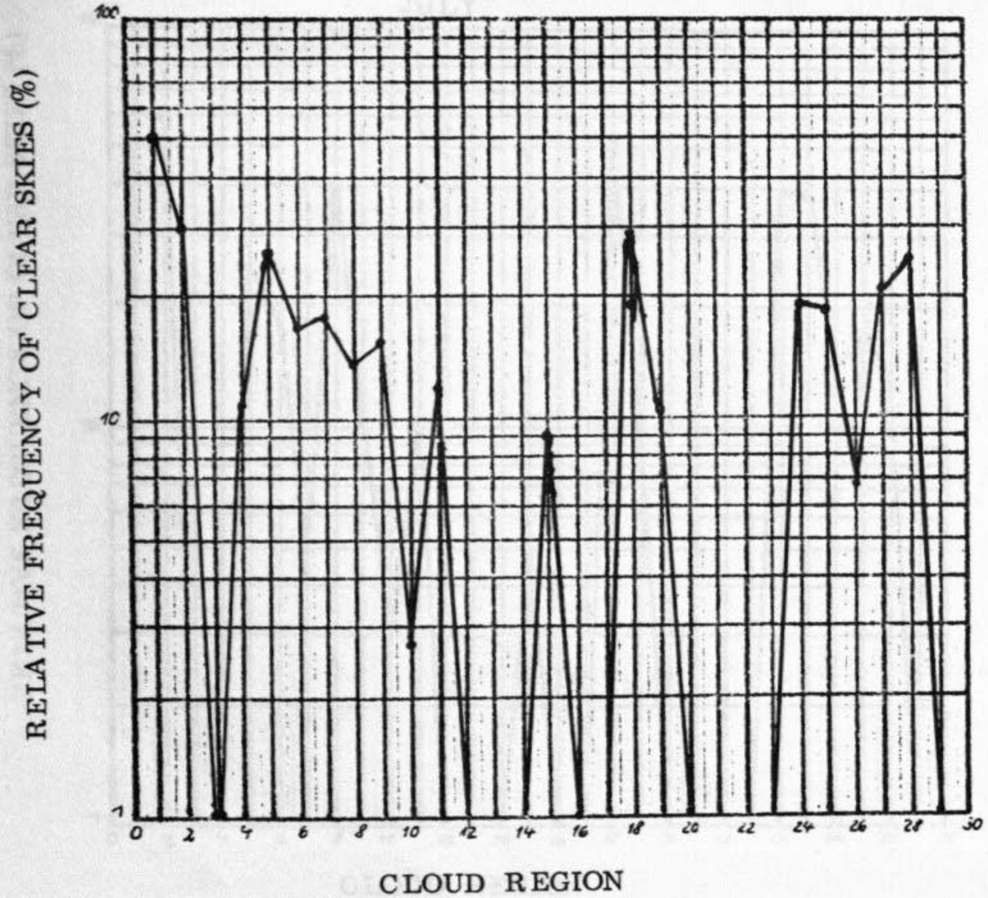
CHARTS OF FREQUENCY OF CLEAR

SKIES BY REGION, JANUARY - DECEMBER

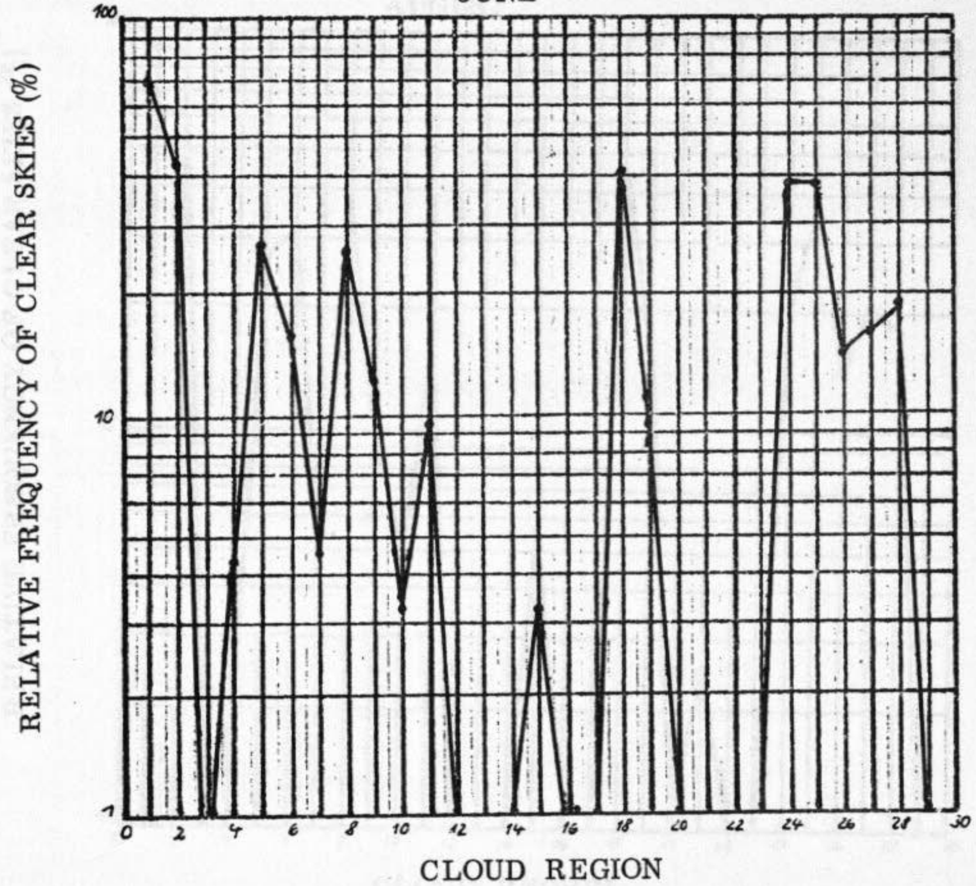
The following charts must be read in conjunction with the Nomogram and Cloud-cover Maps

FREQUENCY OF CLEAR SKIES BY REGION AT 10.00 GM.T. (contd.)

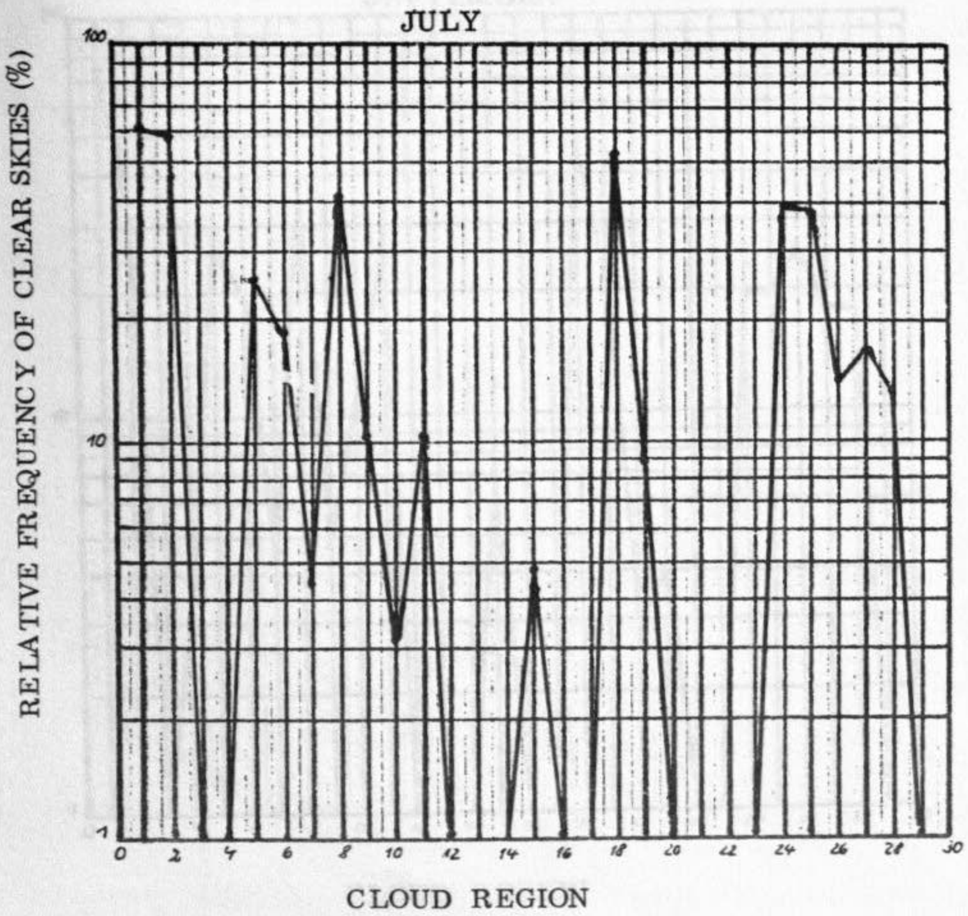
MAY

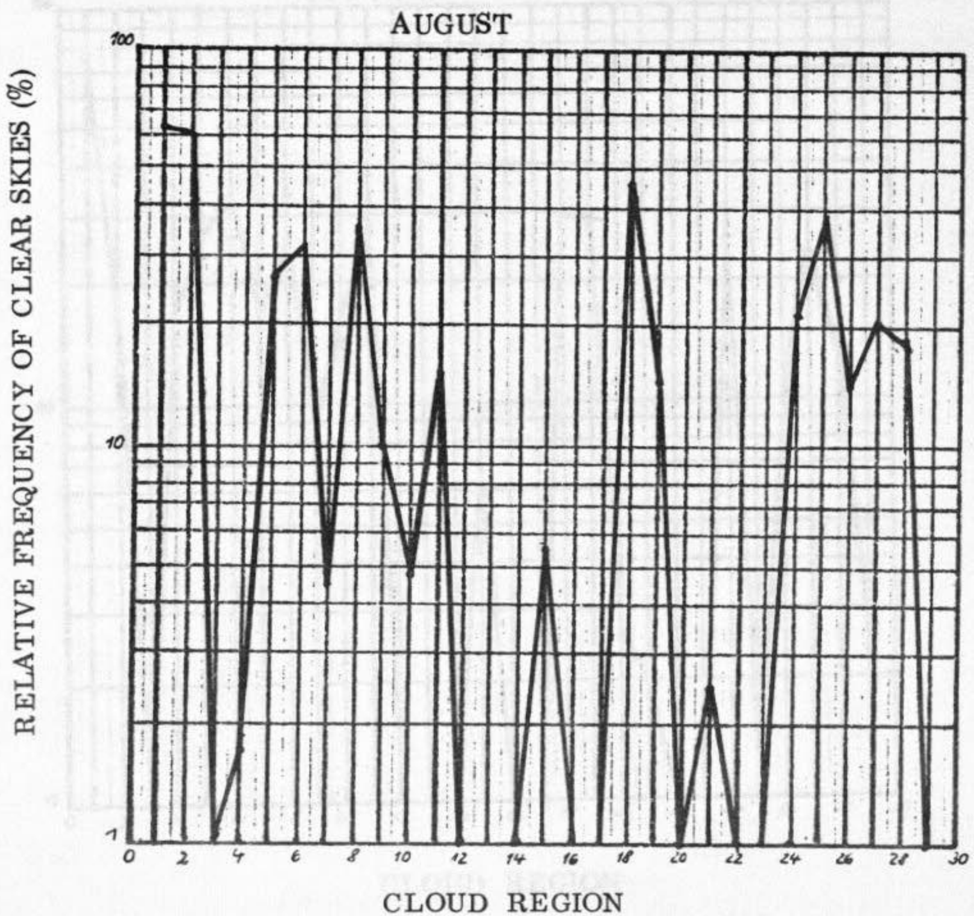


JUNE

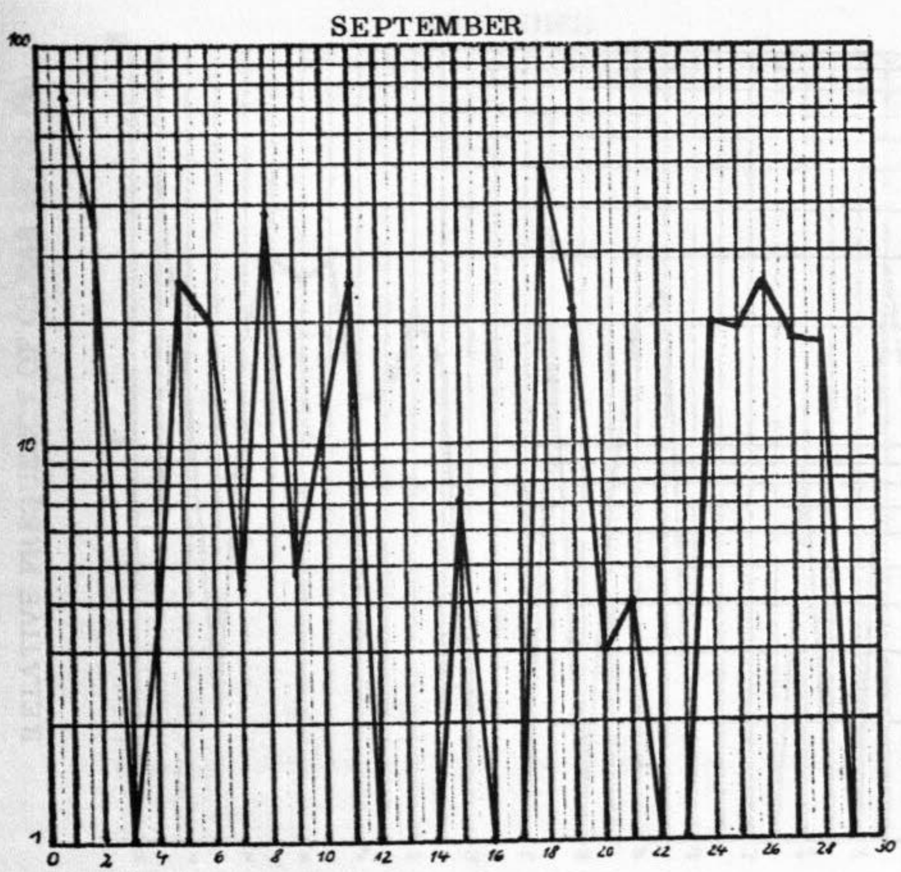


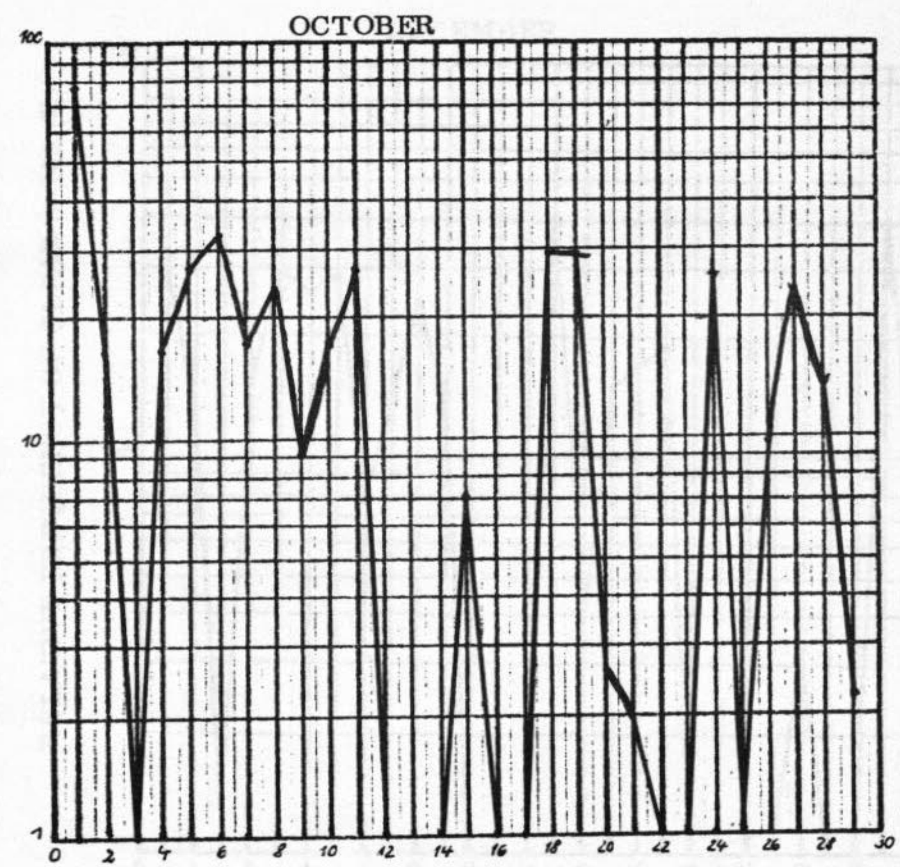
FREQUENCY OF CLEAR SKIES BY REGION AT 10.00 G.M.T. (contd.)





FREQUENCY OF CLEAR SKIES BY REGION AT 10.00 G.M.T. (contd.)

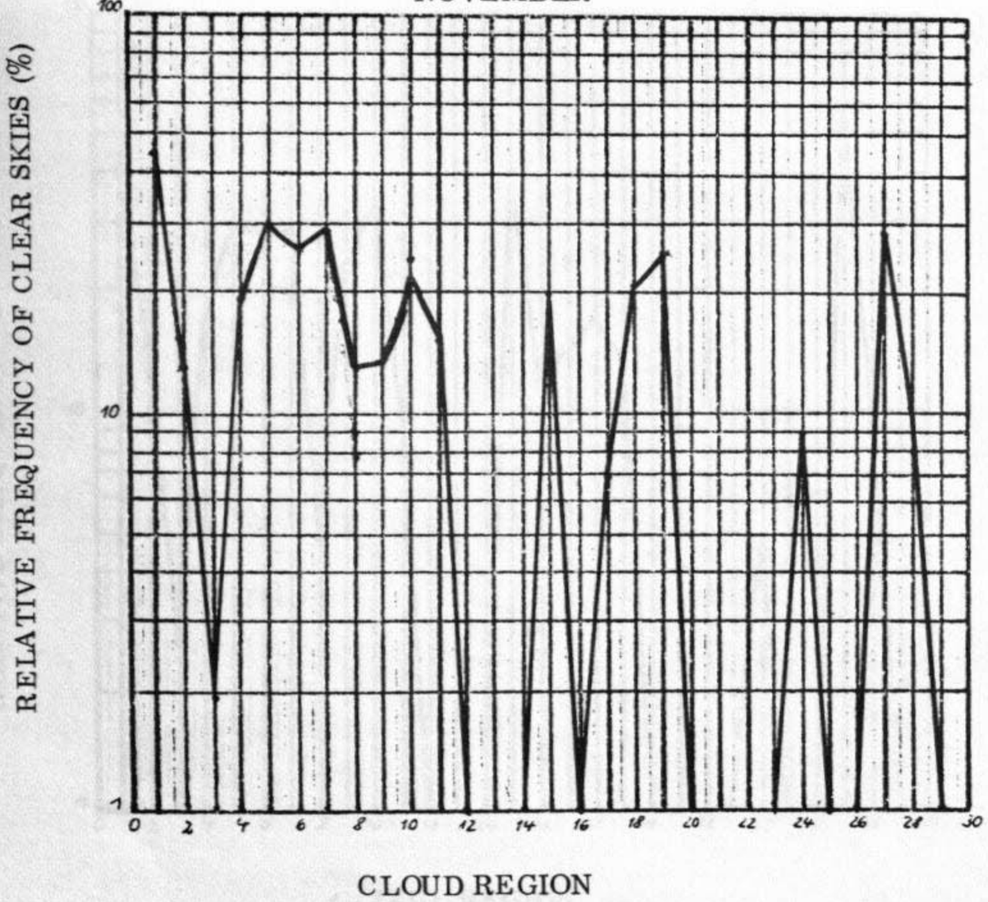




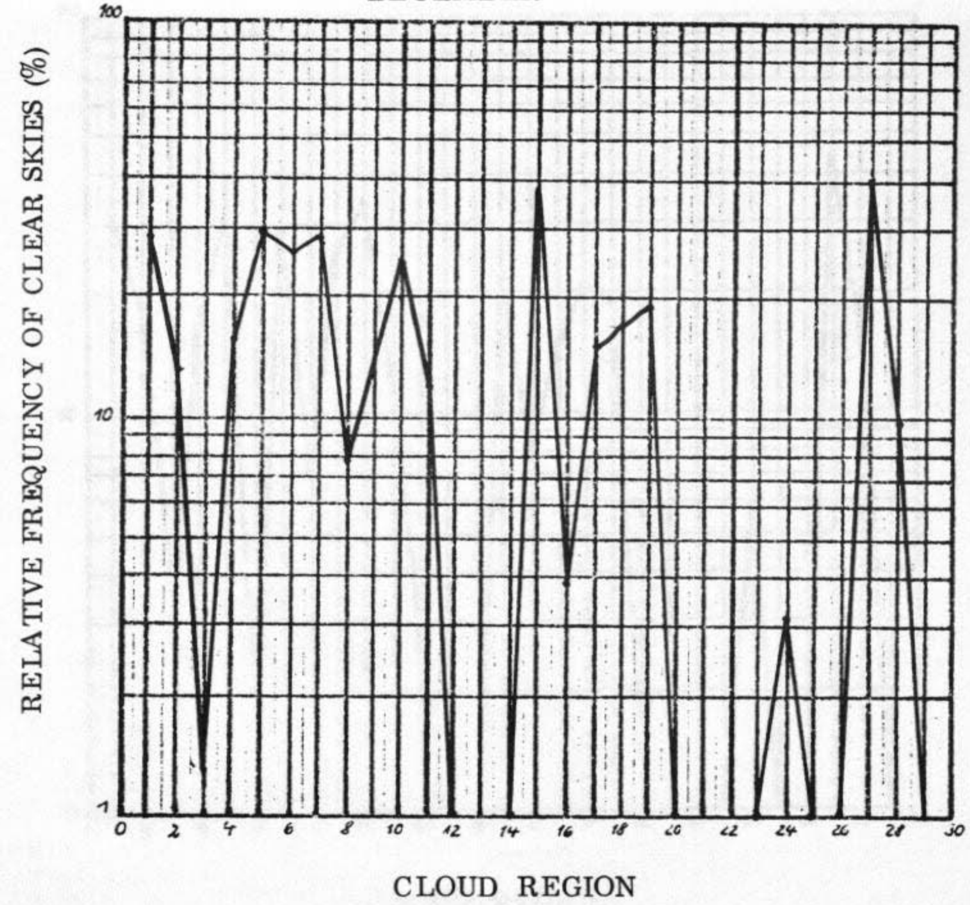
RELATIVE FREQUENCY OF CLEAR SKIES (%)

FREQUENCY OF CLEAR SKIES BY REGION AT 10.00 G.M.T. (contd.)

NOVEMBER

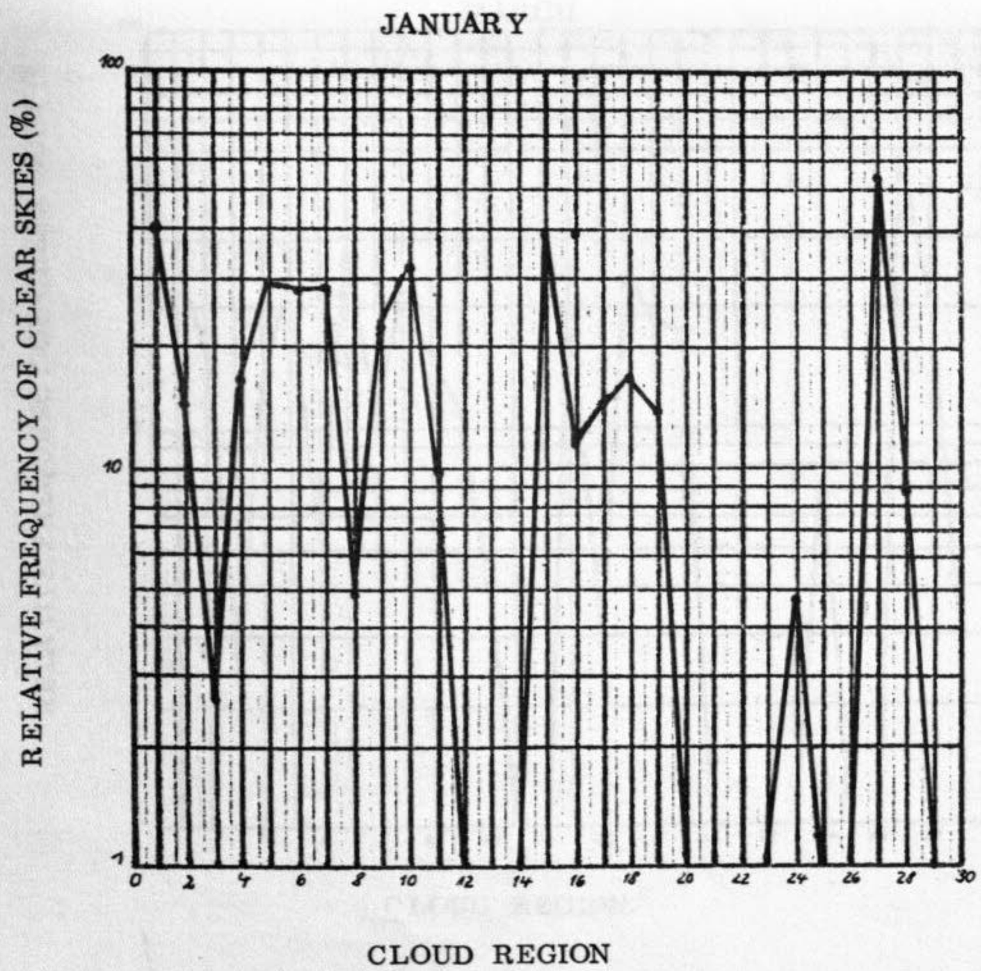


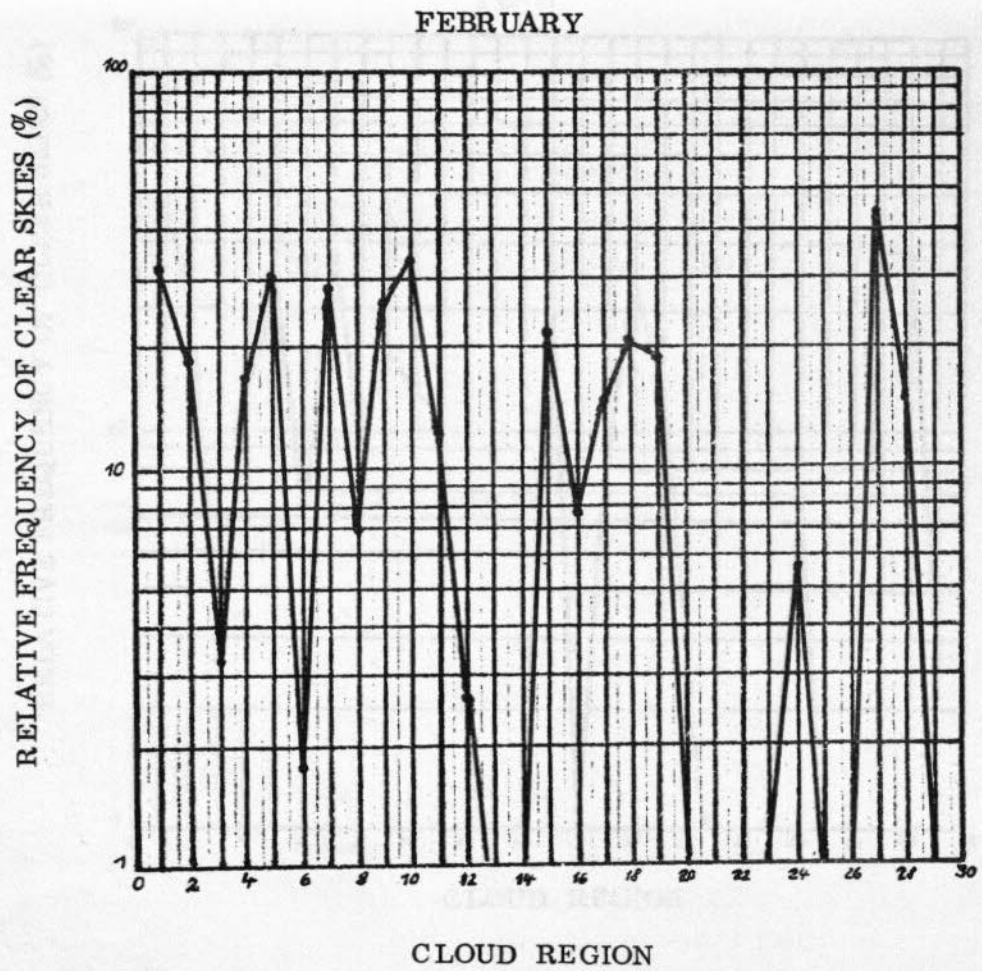
DECEMBER



SOURCE:

FREQUENCY OF CLEAR SKIES BY REGION AT 10.00 G.M.T.





FREQUENCY OF CLEAR SKIES BY REGION AT [illegible] G.M.T. (cont.)