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Table 2.1.1

**LIST OF 35 LOCAL AUTHORITIES SELECTED IN
LOCAL GOVERNMENT REFORM PHASE I**

ARUSHA REGION

1. Arusha Municipal Council
2. Hanang District Council
3. Babati District Council
4. Monduli District Council
5. Simanjiro District Council
6. Kiteto District Council

COAST REGION

1. Kisarawe District Council

DAR ES SALAAM REGION

1. Dar es Salaam City Council

DODOMA REGION

1. Dodoma Municipal Council
2. Kondoa District Council
3. Mpwapwa District Council

IRINGA REGION

1. Iringa Municipal Council
2. Iringa District Council

KAGERA REGION

1. Bukoba District Council

KIGOMA REGION

1. Kasulu District Council

KILIMANJARO REGION

1. Moshi Municipal Council
2. Hai District Council

LINDI REGION

1. Lindi Town Council
2. Kilwa District Council

MARA REGION

1. Musoma Town Council

MOROGORO REGION

1. Morogoro Municipal Council
2. Ulanga District Council

MBEYA REGION

1. Mbeya Municipal Council
2. Rungwe District Council

MTWARA REGION

1. Mtwara Town Council
2. Masasi District Council

MWANZA REGION

1. Mwanza Municipal Council
2. Magu District Council

RUKWA REGION

1. Sumbawanga District Council

RUVUMA REGION

1. Songea District Council

SHINYANGA REGION

1. Shinyanga Town Council
2. Shinyanga District Council

SINGIDA REGION

1. Singida District Council

TABORA REGION

1. Tabora Municipal Council

TANGA REGION

1. Tanga Municipal Council

Table 2.1.2 Annual Produce in Main Horticultural Production Areas

(unit: 1,000 ton)

Region	Morogoro	Mbeya	Iringa	Arusha	Kilimanjaro	Tanga	Main Production Area
Orange	9,400	-	-	200	2,800	63,600	Tanga
Banana	56,300	119,000	12,000	211,000	-	48,300	Arusha
Pineapple	15,600	-	-	-	300	106,000	Tanga
Mango	12,100	-	-	400	2,000	98,000	Tanga
Cabbage	8,300	-	152,000	700	10,200	59,400	Iringa
Tomato	24,100	-	20,000	800	-	49,500	Tanga
Peas	200	400	123,000	-	800	-	Iringa
Peach	2,500	-	-	-	800	2,000	Morogoro
Apple	100	-	-	200	300	3,000	Tanga
Pear	300	-	800	-	900	160,800	Tanga
Onion	11,000	-	25,000	9,200	2,400	7,500	Iringa
Amaranthus	4,100	-	-	900	200	-	Morogoro
Carrot	300	-	-	400	200	-	Arusha
Passion fruits	-	-	14,000	-	-	-	Iringa
Plum	-	-	400	-	300	14,800	Tanga
Avocado	-	-	-	500	3,400	900	Kilimanjaro
Rose	-	-	-	1,000	-	-	Arusha
Eggplant	-	-	-	-	300	2,000	Tanga
Sweet pepper	-	-	-	100	100	2,700	Tanga
Papaya	-	-	-	300	500	175,300	Tanga

Notes: In Mbeya Region, total production of vegetables is 31,300 tons and of fruit excluding banan is 52,500 tons.

Source: Marketing Arrangement for Horticultural Production in Tanzania in 1994/95

Table 3.1.1 Climate Conditions of Coast Region

Station: Dar Es Salaam

Items	unit	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total/ Mean
Rainfall	mm	80.2	64.3	135.5	233.8	226.8	40.7	20.8	27.6	17.5	80.8	124.7	113.9	1,166.6
Temperature (Max.daily)		31.8	32.4	32.2	30.9	29.8	29.4	29.1	29.4	30.4	31.0	31.4	31.6	30.8
Temperature (Min.daily)		23.5	23.5	22.8	22.5	21.3	19.1	18.1	18.1	18.4	19.8	21.3	22.9	20.9
Temperature (Ave.daily)		27.7	28.0	27.5	26.7	25.6	24.3	23.6	23.8	24.4	25.4	26.4	27.3	25.9
Air Humidity (Max.)	%	79.2	77.0	82.8	87.3	86.5	84.2	85.4	84.3	77.2	74.7	75.3	78.0	81.0
Air Humidity (Min.)	%	64.9	61.6	67.9	73.1	68.4	59.0	56.7	55.3	53.2	56.9	61.6	65.5	62.0
Air Humidity (Ave.)	%	72.1	69.3	75.4	80.2	77.5	71.6	71.1	69.8	65.2	65.8	68.5	71.8	71.5
Wind Speed	m/sec	9.85	8.45	5.21	6.55	7.15	8.15	8.42	6.99	7.53	7.86	7.18	9.44	7.7
Sunshine (Ave.daily)	hours	7.48	8.16	6.43	5.53	6.24	7.71	7.49	7.47	8.30	8.41	8.39	7.35	7.4

Station: Kibaha

Items	unit	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total/ Mean
Rainfall	mm	70.4	58.5	164.0	207.7	153.6	26.4	13.6	15.4	16.1	77.5	89.0	92.9	985.2
Temperature (Max.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (Min.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (Ave.daily)		27.3	27.6	27.6	26.4	25.3	24.2	23.8	23.9	24.6	25.5	26.3	27.0	25.8
Air Humidity (Max.)	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Humidity (Min.)	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Humidity (Ave.)	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Speed	m/sec	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine (Ave.daily)	hours	-	-	-	-	-	-	-	-	-	-	-	-	-

Station: Bagamoyo

Items	unit	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total/ Mean
Rainfall	mm	80.6	66.0	92.3	240.8	200.5	41.4	28.3	39.8	18.2	69.6	94.9	111.2	1,083.6
Temperature (Max.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (Min.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (Ave.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Air Humidity (Max.)	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Humidity (Min.)	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Humidity (Ave.)	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Speed	m/sec	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine (Ave.daily)	hours	-	-	-	-	-	-	-	-	-	-	-	-	-

Station: Morogoro

Items	unit	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total/ Mean
Rainfall	mm	93.1	96.6	128.3	194.8	92.0	16.8	12.8	8.8	7.0	34.2	66.6	103.6	854.6
Temperature(Max.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature(Min.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature(Ave.daily)		26.4	26.8	26.4	25.3	23.9	21.9	21.4	22.0	23.3	24.8	26.0	26.4	24.6
Air Humidity(Max.)	%	79.8	80.7	82.5	89.0	89.4	87.8	84.9	83.5	77.9	74.5	74.6	76.0	81.7
Air Humidity(Min.)	%	53.7	52.4	58.1	70.1	65.0	57.6	51.0	46.9	42.5	44.7	48.1	52.6	53.6
Air Humidity(Ave.)	%	66.7	66.5	70.3	79.5	77.2	72.7	68.0	65.2	60.2	59.6	61.3	64.3	67.6
Wind Speed	m/sec	4.21	2.77	2.24	1.18	1.10	1.55	2.89	2.42	1.45	2.57	2.77	4.47	2.5
Sunshine(Ave.daily)	hours	7.79	7.56	6.80	5.78	5.61	6.45	6.26	6.34	7.14	7.84	8.10	7.79	7.0

Station: Utete

Items	unit	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total/ Mean
Rainfall	mm	119.8	84.4	145.9	162.9	90.1	7.5	7.8	5.6	8.4	39.1	69.9	135.7	877.0
Temperature (Max.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (Min.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (Ave.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Air Humidity (Max.)	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Humidity (Min.)	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Humidity (Ave.)	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Speed	m/sec	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine (Ave.daily)	hours	-	-	-	-	-	-	-	-	-	-	-	-	-

Station: Mafia

Items	unit	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total/ Mean
Rainfall	mm	133.6	82.5	272.6	446.2	309.3	91.5	47.4	28.4	15.7	46.3	140.7	212.4	1,826.6
Temperature (Max.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (Min.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature (Ave.daily)		-	-	-	-	-	-	-	-	-	-	-	-	-
Air Humidity (Max.)	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Humidity (Min.)	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Humidity (Ave.)	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Speed	m/sec	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine (Ave.daily)	hours	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes: (-) Not observed, or there are some missing data during latest 20 years.

Table 3.1.2 Characteristics of the Hydrogeologic Zones and Groundwater Availability

Zone	Sub-zone	Characteristics	Water Depth	Groundwater availability	*Rank
A	-	It includes the Precambrian metamorphic rocks northwest of the Ruvu River. The water table configuration results in stream valleys becoming discharge zones and springs are expected. Shallow wells presently used by villagers are located in the alluvium of the small valleys.	Water levels vary in depth from a meter or less to as much as 12 m, depending on season and location.	Boreholes are not recommended, while shallow wells in some alluvial fills may provide water adequate for limited use.	III
B	B-1	It consists of the Mesozoic sediments that lie between the Ruvu River and the Precambrian rocks of Zone A.	No groundwater is observed.	Groundwater utilization is not recommended.	V
	B-2	It consists of the Mesozoic Neogene sediments that lie between the Ruvu River and the Precambrian rocks of Zone A.	Water levels vary in depth from a meter or less to 12 m at most, depending on seasons and locations.	Limited use of shallow ring wells constructed to extract groundwater from the alluvium of small stream valleys.	IV
C	-	The floodplains of the Wami, Ruvu and Rufiji Rivers are considered jointly as Zone C. The floodplains are lying in discharge zones, groundwater will be seeping from all adjacent areas.	Water levels are in depth within a few meters.	Large diameter concrete ring wells are recommended for extraction of groundwater in the floodplain alluvium. Boreholes may be appropriate in a few locations.	I
D	D-1	All the areas bounded by the floodplains of rivers and Indian Ocean are defined as Zone D. D-1 includes Neogene Highlands. The alluvial fills of small stream valleys provide sites with presently used shallow wells in many villages. Dry season supply of the most villages is inadequate.	Water levels vary in depth from a meter or less to 12 m at most, depending on seasons and locations.	Shallow wells located in stream valley alluvium are possible	III
	D-2	D-2 includes the Mesozoic Rocks.	Water levels vary in depth from a meter or less to 12 m at most, depending on seasons and locations.	Shallow wells located in stream valley alluvium are possible	III
	D-3	D-3 includes the Neogene Hills with alluvial filled depressions and minor Cretaceous outcrops.	Water levels vary in depth from a meter or less to 12 m at most, depending on seasons and locations.	Shallow wells located in stream valley alluvium are possible	III
	D-4	D-4 includes the broad flat "apron" of Quaternary deposits	Water levels vary in depth from a meter or less to 6 m at most, depending on seasons and locations.	Shallow wells located in stream valley alluvium are possible, furthermore boreholes are recommended with cares preventing saltwater intrusion	II
E	-	It consists of the small area of Karoo sedimentary rocks in the extreme southwest corner of the Region. Streams run only in the wet season <u>except when fed by hot springs.</u>	No groundwater is observed	Groundwater utilization is not recommended.	V
F	F-1	It is the area south of the Rufiji River floodplains bounded by the Karoo Rocks to the west. The stream valley alluvial deposits will provide sites with shallow wells but the wells will be hampered by the presence of much silt and clay. F-1 consists mostly of Neogene Highland.	A hot spring is located close to Utete. The water table is variable in depth below the ground surface from a few meters or less in lowlands to something <u>much greater on terraces</u>	Shallow wells located in stream valley alluvium are recommended.	III
	F-2	F-2 is the apron of Quaternary deposits, similar to D-4	The water table is variable in depth below the ground surface from a few meters in lowlands to something much greater on terraces	Shallow wells located in stream valley alluvium are recommended, however care must be taken to avoid saltwater intrusion where the coast near.	III
G	-	Mafia Island and adjacent small islands stand as an independent hydrogeologic zone. Fresh water on the island occurs as a lens on top of the saltwater. Saltwater intrusion is problem as the sites are close to the coast.	The water table is variable in depth below the ground surface from a few meters. About three meters below sea level can be penetrated with a well or borehole.	Shallow ring wells are recommended located in stream valley alluvium or lowland discharge zones. Saltwater intrusion is problem.	II

Rank: I: Very much available II: Much available III: Possible
 IV: Poorly possible V: Hardly possible VI: Impossible

Table 3.1.3 Land Cover/Land Use by District in Coast Region

Land Cover/Land Use	Kibaha		Bagamoyo		Mafia		Kisarawe/Mkuranga		Rufiji		Coast Region	
	Area	Coverage	Area	Coverage	Area	Coverage	Area	Coverage	Area	Coverage	Area	Coverage
Forest	9,622	4.9%	7,425	0.9%	7,576	13.5%	25,521	3.3%	73,685	5.7%	123,829	3.9%
Natural Forest	5,453	2.8%	793	0.1%	3,756	6.7%	20,483	2.6%	24,309	1.9%	54,794	1.7%
Mangrove	0	0.0%	4,143	0.5%	3,820	6.8%	5,038	0.7%	49,300	3.8%	62,301	2.0%
Plantation	4,169	2.1%	2,489	0.3%	0	0.0%	0	0.0%	76	0.0%	6,734	0.2%
Woodland	32,726	16.6%	362,905	42.2%	11,967	21.3%	381,021	49.2%	608,794	46.9%	1,387,413	43.9%
Woodland (Unspecified Density)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Closed Woodland	9,782	5.0%	52,706	6.1%	1,981	3.5%	197,000	25.5%	209,051	16.1%	470,520	14.8%
Open Woodland	10,892	5.5%	207,965	24.2%	427	0.8%	61,840	8.0%	335,147	25.8%	616,271	19.3%
Woodland with Scattered Cropland	12,052	6.1%	102,234	11.9%	9,559	17.0%	122,181	15.8%	64,596	5.0%	310,622	9.7%
Bushland	83,750	42.4%	262,751	30.6%	536	1.0%	88,340	11.4%	96,589	7.4%	531,966	16.7%
Bushland (Unspecified Density)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Dence Bushland	0	0.0%	0	0.0%	0	0.0%	0	0.0%	16,438	1.3%	16,438	0.5%
Open Bushland	0	0.0%	1,373	0.2%	0	0.0%	0	0.0%	22	0.0%	1,395	0.0%
Bushland with Scattered Cropland	58,146	29.5%	143,603	16.7%	536	1.0%	47,812	6.2%	22,883	1.8%	272,980	8.6%
Bushland with Emergent Trees	1,469	0.7%	113,563	13.2%	0	0.0%	21,984	2.8%	0	0.0%	137,016	4.3%
Thicket	0	0.0%	949	0.1%	0	0.0%	0	0.0%	0	0.0%	949	0.0%
Thicket with Emergent Trees	24,135	12.2%	3,263	0.4%	0	0.0%	18,544	2.4%	57,246	4.4%	103,188	3.2%
Grassland	7,678	3.9%	66,384	7.7%	1,748	3.1%	171,330	22.1%	409,875	31.6%	657,015	20.6%
Wooded Grassland	10	0.0%	12,904	1.5%	18	0.0%	54,454	7.0%	106,061	8.2%	173,447	5.4%
Bushed Grassland	6,433	3.3%	21,454	2.5%	162	0.3%	4,456	0.6%	10,789	0.8%	43,294	1.4%
Open Grassland	0	0.0%	676	0.1%	0	0.0%	177	0.0%	2,325	0.2%	3,178	0.1%
Grassland with Scattered Cropland	1,235	0.6%	25,157	2.9%	203	0.4%	63,432	8.2%	192,630	14.8%	282,657	8.9%
Wooded Grassland (Seasonally Inundated)	0	0.0%	1,127	0.1%	0	0.0%	38,302	4.9%	71,504	5.5%	110,933	3.5%
Bushed Grassland (Seasonally Inundated)	0	0.0%	4,732	0.6%	1,365	2.4%	4,780	0.6%	4,515	0.3%	15,392	0.5%
Open Grassland (Seasonally Inundated)	0	0.0%	334	0.0%	0	0.0%	5,729	0.7%	22,051	1.7%	28,114	0.9%
Cultivated Land	63,034	31.9%	156,878	18.2%	24,243	43.1%	95,567	12.3%	62,241	4.8%	401,963	12.6%
Mixed Cropping	13,044	6.6%	51,251	6.0%	5,169	9.2%	14,907	1.9%	9,445	0.7%	93,816	2.9%
Cultivation with Tree Crops	38,913	19.7%	85,068	9.9%	19,074	33.9%	76,491	9.9%	45,068	3.5%	264,614	8.3%
Cultivation with Bushy Crops	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Cultivation with Tree Crops (with Shade Tree)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Cultivation with Herbaceous Crops	11,077	5.6%	20,559	2.4%	0	0.0%	4,169	0.5%	7,728	0.6%	43,533	1.4%
Open Land	0	0.0%	2,279	0.3%	9,997	17.8%	677	0.1%	8,444	0.7%	21,397	0.7%
Bare Soil	0	0.0%	1,203	0.1%	9,997	17.8%	151	0.0%	8,444	0.7%	19,795	0.6%
Salt Crusts	0	0.0%	1,076	0.1%	0	0.0%	526	0.1%	0	0.0%	1,602	0.1%
Rock Outcrops	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Ice-Cap/Snow	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Water Features	53	0.0%	22	0.0%	0	0.0%	11,007	1.4%	38,843	3.0%	49,925	1.6%
Ocean	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Inland Water	28	0.0%	22	0.0%	0	0.0%	1,350	0.2%	16,279	1.3%	17,679	0.6%
Swamp/Marsh (Permanent)	25	0.0%	0	0.0%	0	0.0%	9,657	1.2%	22,564	1.7%	32,246	1.0%
Others	484	0.3%	968	0.1%	222	0.4%	415	0.1%	541	0.0%	2,640	0.1%
Urban Areas (Incl. Airfields, etc.)	494	0.3%	968	0.1%	222	0.4%	415	0.1%	541	0.0%	2,640	0.1%
Total	197,357	100.0%	859,612	100.0%	56,289	100.0%	773,878	100.0%	1,299,012	100.0%	3,186,148	100.0%

Source: National Reconnaissance Level Land Use and Natural Resources Mapping Project, 1997

Table 3.2.1 Average Annual Regional GDP Contribution to National GDP (1980-1994)

Region	Average Annual GDP contribution (%)
Dar es Salaam	20.33
Arusha	7.80
Mwanza	7.67
Mbeya	6.00
Shinyanga	5.80
Iringa	5.53
Tanga	5.52
Morogoro	4.67
Kagera	4.60
Kilimanjaro	3.67
Mara	3.47
Tabora	3.40
Ruvuma	3.33
Mtwara	3.27
Rukwa	3.13
Dodoma	3.07
Singida	2.87
Kigoma	2.53
Lindi	2.00
Coast	1.00
Total	100.00

Source: The Coast Region Socio-economic Profile, 1997

Table 3.2.2 Literacy Rate for Population Aged 10 Years Above

Region	1978	1988
Kilimanjaro	74.1	80.8
Dar es Salaam	73.3	80.7
Ruvuma	66.3	70.5
Iringa	54.0	68.3
Tanga	60.6	66.0
Mara	56.4	63.9
Morogoro	58.6	62.8
Mbeya	49.2	61.9
Kagera	52.9	59.5
Rukwa	48.5	58.6
Arusha	41.9	58.1
Singida	46.7	57.4
Mwanza	44.3	57.3
Mtwara	51.4	57.1
Dodoma	49.5	55.5
Kigoma	43.7	55.1
Lindi	48.4	53.8
Coast	44.0	51.1
Tabora	40.5	50.5
Shinyanga	33.2	48.3

Source: The Coast Region Socio-economic Profile, 1997

**Table 3.2.3 Population Distribution by Sex and Age Groups
by District, Coast Region 1988**

District	Sex	Age Groups (Years)				Not Stated	Total
		0-14	15-24	25-64	65 over		
Bagamoyo	Males	38,734	14,742	26,516	5,544		85,536
	Females	37,967	16,436	29,050	4,896	33	88,382
	Total	76,701	31,178	55,566	10,440	33	173,918
Kibaha	Males	16,981	7,531	12,751	3,866	166	41,295
	Females	16,797	7,898	14,047	2,595	389	41,723
	Total	33,778	15,429	26,798	6,461	552	83,018
Kisarawe	Males	42,482	13,570	27,407	10,202	461	94,122
	Females	41,397	16,333	34,112	9,385	360	101,587
	Total	83,879	29,903	61,519	19,587	821	195,709
Rufiji	Males	33,209	11,261	21,382	5,761		71,613
	Females	33,091	13,441	27,752	6,419		80,703
	Total	66,300	24,702	49,134	12,180		152,316
Mafia	Males	7,359	3,306	5,789	731		17,185
	Females	7,114	3,056	4,966	733		15,869
	Total	14,473	6,362	10,755	1,464		33,054
Total	Males	138,815	50,410	93,845	26,104	627	309,751
	Females	136,316	57,164	109,927	24,028	779	328,264
	Total	275,131	107,574	203,772	50,132	1,406	638,015

Source: Population Census 1988.

Table 3.2.4 Distribution of Roads by Division in Coast Region

Name of District	Name of Division	Area (km ²)	(km)				(km/km ²)	
			Trunk Road	Regional Road	District Road	Feeder Road	Total	Road Density
BAGAMOYO	KWARUHOMBO	1,030	0.0	68.0	0.0	44.8	112.8	0.110
	MIONO	4,097	45.0	64.0	0.0	71.8	180.8	0.044
	MSATA	755	0.0	64.0	22.0	56.6	142.6	0.189
	MSOGA	2,541	79.0	0.0	51.0	85.6	215.6	0.085
	MWAMBAO	641	0.0	157.0	0.0	103.4	260.4	0.406
	YOMBO	778	30.0	0.0	0.0	19.8	49.8	0.064
	Sub-total	9,842	154.0	353.0	73.0	382.0	962.0	0.098
MAFIA	KUSINI	276	0.0	36.2	19.2	55.9	111.4	0.403
	KASKAZINI	242	0.0	31.8	16.8	49.1	97.6	0.403
	Sub-total	518	0.0	68.0	36.0	105.0	209.0	0.403
MKURANGA	KISIJU	503	27.0	20.0	24.0	48.0	119.0	0.237
	MKAMBA	990	18.0	0.0	57.5	52.0	127.5	0.129
	MKURANGA	805	65.0	12.0	100.5	91.0	268.5	0.334
	SHUNGUBWENI	134	0.0	13.0	30.0	37.0	80.0	0.597
	Sub-total	2,432	110.0	45.0	212.0	228.0	595.0	0.245
KISARAWE	CHOLESAMVULA	1,534	0.0	25.0	10.0	65.0	100.0	0.065
	SUNGWI	937	0.0	53.0	40.0	82.0	175.0	0.187
	MANEROMANGO	837	0.0	34.0	26.0	54.0	114.0	0.136
	MZENGA	1,156	0.0	49.0	36.0	144.0	229.0	0.198
	Sub-total	4,464	0.0	161.0	112.0	345.0	618.0	0.138
KIBAHA	KIBAHA	546	35.0	0.0	143.0	67.5	245.5	0.450
	MLANDIZI	869	10.0	45.0	25.0	20.0	100.0	0.115
	RUVU	397	0.0	32.0	74.0	8.0	114.0	0.287
	Sub-total	1,812	45.0	77.0	242.0	95.5	459.5	0.254
RUFJI	IKWIRIRI	575	24.0	0.0	5.0	10.0	39.0	0.068
	KIBITI	1,811	51.0	54.0	10.0	198.0	313.0	0.173
	KIKALE	1,151	0.0	5.0	36.0	41.0	82.0	0.071
	MKONGO	6,776	0.0	63.0	164.0	49.0	276.0	0.041
	MBWERA	512	0.0	0.0	0.0	19.0	19.0	0.037
	MHORO	2,514	43.0	0.0	0.0	107.0	150.0	0.060
Sub-total	13,339	118.0	122.0	215.0	424.0	879.0	0.066	
Whole Region		32,407	427	826	890	1,580	3,723	0.115

Table 3.2.5 Water Supply Conditions in Coast Region

Name of District	Name of Division	Population	Pumped Water Schemes		Deep Water Wells		Shallow Water Wells		Water Dams		Others		Total		
			Numbers	Beneficiaries	Numbers	Beneficiaries	Numbers	Beneficiaries	Numbers	Beneficiaries	Numbers	Beneficiaries	Numbers	Beneficiaries	
BAGAMOYO	KWARUHOMBO	22,572	2	5,680	2	-	2	500	7	14,315	0	0	13	20,495	
	MIONO	26,790	2	6,705	-	-	6	1,500	6	12,337	0	0	14	20,542	
	MSATA	22,790	2	7,650	-	-	4	1,000	10	15,821	0	0	16	24,471	
	M SOGA	79,428	4	27,152	-	-	14	3,500	24	29,338	0	0	42	59,990	
	MWAMB AO	26,778	1	26,778	-	-	0	0	0	0	0	0	1	26,778	
	YOMBO	24,928	1	24,928	-	-	0	0	0	0	0	0	1	24,928	
	Sub-Total	203,286	12	98,893	2	-	26	6,500	47	71,811	0	0	87	177,204	
MAFIA	KUSINI	21,460	0	-	2	-	17	-	0	-	0	0	19	-	
	KASKAZINI	23,982	1	-	3	-	18	-	0	-	0	0	19	-	
	Sub-Total	45,442	1	-	5	-	35	-	0	-	0	0	41	-	
MKURANGA	KISIJU	45,554	4	7,138	0	0	9	2,250	0	-	2	15,000	15	24,388	
	MKAMBA	45,314	1	-	0	0	23	5,750	0	-	0	0	24	5,750	
	MKURANGA	34,755	2	3,826	1	-	43	10,750	0	-	0	0	46	14,576	
	SHUNGUBWENI	16,277	0	0	0	0	7	1,750	0	-	2	9,900	9	11,650	
		Sub-Total	141,900	7	10,964	1	0	82	20,500	0	-	4	24,900	94	56,364
	KISARAW E	CHOLESAMVULA	20,442	0	0	0	-	5	1,500	0	-	0	0	5	1,500
SUNGWI		39,571	3	15,000	1	-	0	0	1	-	0	0	4	15,000	
MANEROMANGO		14,628	1	5,000	0	-	11	3,300	0	-	0	0	12	8,300	
MZENGA		19,129	1	5,000	0	-	9	2,700	0	-	0	0	10	7,700	
		Sub-Total	93,770	5	25,000	1	-	25	7,500	1	-	0	0	32	32,500
KIBAH A		KIBAH A	56,714	1	26,860	0	-	4	4,570	4	-	1	-	10	31,430
	MLANDIZI	37,132	1	25,000	0	-	0	0	0	0	0	-	1	25,000	
	RUVU	19,736	1	10,000	5	-	9	13,580	6	8,060	0	-	16	23,580	
		Sub-Total	113,582	3	61,860	5	-	13	18,150	10	8,060	1	0	27	80,010
	RUFUJI	IKWIRIRI	21,991	1	17,250	2	1,000	17	4,250	0	0	20	22,500	40	44,000
		KIBITI	58,630	7	3,150	24	6,000	33	8,250	0	0	64	17,400	104	28,800
KIKALE		21,567	3	3,521	6	1,500	4	1,000	0	0	13	6,021	20	10,542	
MKONGO		43,818	10	13,500	0	0	0	0	0	0	10	13,500	20	27,000	
MBWERA		21,310	0	0	0	0	14	3,500	0	0	14	3,500	28	7,000	
MHORO		16,139	6	4,261	2	500	10	2,500	0	0	18	7,261	34	14,022	
	Sub-Total	183,455	27	41,682	34	9,000	78	19,500	0	0	139	70,182	246	131,364	

Table 3.2.6 Conditions of Social Infrastructure in Coast Region

Name of District	Name of Division	Population		Pre-Primary Centres		Primary Schools		Secondary Schools		Hospital		Health Centres		Dispensaries	
		Numbers	Pupils	Numbers	Enrolments	Numbers	Enrolments	Numbers	Enrolments	Numbers	Beneficiaries	Numbers	Beneficiaries	Numbers	Beneficiaries
BAGAMOYO	KWARUHOMBO	0	0	11	2,746	0	0	0	0	0	0	1	3,400	4	8,620
	MIONO	1	41	15	4,109	0	0	0	0	0	0	1	14,230	7	9,635
	MSATA	0	0	15	2,815	0	0	0	0	0	0	0	0	3	26,655
	M SOGA	3	203	31	9,563	1	320	0	0	0	0	2	8,785	8	11,915
	MWAMB AO	4	147	8	3,394	1	480	1	32,230	0	0	0	0	1	2,795
	YOMBO	0	61	13	4,362	0	0	0	0	0	0	0	0	6	16,602
	Sub-Total	8	452	82	26,989	2	800	1	32,230	3	26,415	25	76,222		
MAFIA	KUSINI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	KASKAZINI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MKURANGA	Sub-Total	4	-	18	-	1	-	1	-	0	-	10	-		
	KISIJU	0	0	24	5,096	2	480	0	0	0	0	1	45,554	5	45,554
	MKAMBA	2	91	26	6,280	0	0	0	0	0	0	1	45,314	7	45,314
	MKURANGA	6	168	18	5,733	2	1,360	0	0	0	0	0	0	5	34,755
	SHUNGUBWENI	0	0	8	1,234	0	0	0	0	0	0	0	0	2	16,277
	Sub-Total	8	259	76	18,343	4	1,840	0	0	0	0	2	90,868	19	141,900
KISARAW E	CHOLESAMVULA	0	0	14	2,247	0	0	0	0	0	0	0	0	3	19,998
	SUNGWI	6	313	16	5,125	3	1,160	1	37,150	0	0	0	0	5	33,329
	MANEROMANGO	1	45	15	3,991	1	300	0	0	0	0	1	45,000	3	19,998
	MZENGA	0	0	17	3,212	0	0	0	0	0	0	1	45,000	4	26,663
	Sub-Total	7	358	62	14,575	4	1,460	1	37,150	2	90,000	15	99,988		
	KIBAHA	8	160	22	10,157	4	1,200	1	55,000	1	30,000	10	50,000		
KIBAHA	MLANDIZI	3	40	6	1,793	2	600	0	0	0	0	1	20,000	1	20,000
	RUVU	0	0	6	1,355	0	0	0	0	0	0	0	0	2	8,762
	Sub-Total	11	200	34	13,305	6	1,800	1	55,000	2	50,000	13	78,762		
	IKWIRIRI	1	59	4	1,932	1	249	0	0	0	0	1	4,330	1	4,186
	KIBITI	4	222	31	7,981	2	725	1	86,460	1	4,330	10	41,860		
	KIKALE	0	0	15	2,301	0	0	0	0	0	0	0	0	7	21,567
RUFJI	MKONGO	1	88	24	5,822	2	506	1	86,460	1	4,330	13	43,818		
	MBWERA	0	0	11	1,446	0	0	0	0	0	0	0	0	12	21,310
	MHORO	0	0	11	2,260	0	0	0	0	0	0	1	4,330	16	16,139
	Sub-Total	6	369	96	21,742	5	1,480	2	172,920	4	17,320	59	148,880		

Table 3.3.1 Horticultural Crop Production in Tanzania

(Unit: ton)

	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	Average	Remark
Vegetables								
Tomato	33,383	34,022	37,044	45,412	74,614	114,920	44,895	ex. 95/96
Cabbage	11,841	12,060	23,050	17,593	25,573	178,480	18,023	ex. 95/96
Onion	24,059	16,108	16,319	19,609	22,238	33,766	22,017	
Amaranthus	5,997	6,935	6,940	7,627	16,936	15,801	10,039	
Chinese Cabbage	2,402	2,432	2,465	2,554	2,748	2,560	2,527	
Okra	277	295	306	319	375	434	334	
Carrot	107	157	207	254	308	308	224	
Garden Pea	132	134	136	138	200	23,250	148	ex. 95/96
Swisschard	2	2	2	2	40	111	10	ex. 95/96
Garlic	13	22	19	22	39	48	27	
Ginger	158	205	213	185	330	446	256	
Fruits								
Orange	38,507	25,823	27,051	41,354	47,850	42,436	37,170	
Mango	61,351	45,394	45,266	62,467	64,432	55,039	55,658	
Papaya	1,740	1,663	1,774	5,208	9,585	3,902	3,979	
Pineapple	24,018	26,718	37,150	34,023	39,748	40,546	33,701	
Banana	92,885	55,520	63,105	71,187	74,732	76,964	72,399	
Guava	2,470	2,431	2,550	2,691	4,582	3,772	3,083	
Passionfruit	1,009	1,013	1,553	1,680	1,707	1,906	1,478	
Lemon	2,975	3,453	4,000	4,454	8,082	5,684	4,775	
Mandarin	1,963	2,093	2,223	2,363	2,786	2,563	2,332	
Avocado	309	399	707	789	778	1,871	596	ex. 95/96
Soursop	30	25	22	30	1,318	353	296	
Peach	1,919	2,060	2,200	2,321	2,382	2,482	2,227	
Plum	401	480	501	512	516	1,324	482	ex. 95/96
Pear	166	189	239	241	244	1,261	216	ex. 95/96
Apple	76	91	106	106	120	536	100	ex. 95/96

Source: Horticultural Development in Kibaha District, Coast Region, TISCO, 1997

Table 3.3.2 Horticultural Crop Production in Coast Region

(Unit: ton)

Crop	District	90/91	91/92	92/93	93/94	94/95	95/96	96/97
Pineapple	Bagamoyo	4,566	5,020	5,556	6,350	7,650	9,066	9,975
	Kisarawe	2,300	2,520	2,755	3,265	3,760	4,250	6,237
	Kibaha	990	1,000	1,103	1,250	1,550	1,780	1,958
	Rufiji	185	200	220	230	204	270	300
	Mafia	21	21	30	40	55	60	60
	Total		8,062	8,761	9,664	11,135	13,219	15,426	18,530
Mango	Bagamoyo	530	585	645	730	870	960	1,050
	Kisarawe	540	935	1,025	1,127	1,088	1,200	1,220
	Kibaha	401	445	500	530	540	680	750
	Rufiji	980	1,020	1,250	1,355	1,850	1,932	2,000
	Mafia	90	100	110	120	136	150	150
	Total		2,541	3,085	3,530	3,862	4,484	4,922	5,170
Orange	Bagamoyo	1,440	1,900	2,045	2,240	2,400	3,400	3,760
	Kisarawe	3,327	3,655	4,018	4,419	5,180	5,670	4,475
	Kibaha	1,680	1,850	2,045	2,580	2,870	3,090	3,399
	Rufiji	1,923	2,114	2,320	2,900	3,250	3,550	3,905
	Mafia	270	300	345	405	456	515	515
	Total		8,640	9,819	10,773	12,544	14,156	16,225	16,054
Tomato	Bagamoyo	1,350	1,415	1,650	1,800	2,000	2,500	2,700
	Kisarawe	2,240	2,550	2,775	3,045	3,900	4,200	4,000
	Kibaha	680	780	870	960	1,210	1,340	1,450
	Rufiji	335	345	375	420	495	550	550
	Mafia	15	15	15	30	45	62	60
	Total		4,620	5,105	5,685	6,255	7,650	8,652	8,760

Source: Horticulture Unit, Ministry of Agriculture

Table 3.3.3 Crop Production by Division (5/5)

Crop	Item	Unit	Mwambao Bagamoyo	Yombo Bagamoyo	Msoaga Bagamoyo	Masata Bagamoyo	Miono Bagamoyo	Bagamoyo	Kwaruhombo Bagamoyo	Total Bagamoyo	Kibaha	Mlandizi Kibaha	Ruvu Kibaha	Total Kibaha	Kisiju Kibaha	Mkamba Kibaha	Mkuranga Kibaha	Mkuranga Kibaha	Shungwini Kibaha	Total Kuranga	Chole Kisarawe	Mzenaga Kisarawe	Maneromango Kisarawe	Sungwi Kisarawe	Total Kisarawe	Ikwira Kisarawe	Kititi Kisarawe	Kikale Kisarawe	Mkongo Kisarawe	Mbwera Kisarawe	Mhoro Kisarawe	Total Kisarawe	Coast Region						
Cashew (Tree Crop)	Area	(ha)	183	1,311	414	1,500			3,408	7,102	7,980	2,663	17,756	10,000		7,000	7,000	1,500	1,500	1,500	20,000	5,075	3,881	3,284	2,687	14,925	3,110	4,400	148	2,034	1,040	1,040	11,772	87,862					
	Yield	(ton/ha)	1.50	1.50	1.50	1.50			1.50	5,113																													
	Production	(ton)	275	1,967	620	2,251			1,000	7,700	7,102	7,980	2,663	17,756	10,000	7,000	7,000	1,500	1,500	1,500	20,000	15,712	11,772	11,772	11,772	15,712	4,720	6,600	148	3,052	1,544	1,544	14,925	87,862					
Coconut (Tree Crop)	Area	(ha)																																					
	Yield	(ton/ha)																																					
	Production	(ton)																																					
Oil Palm (Tree Crop)	Area	(ha)																																					
	Yield	(ton/ha)																																					
	Production	(ton)																																					
Total Tree Crops	Area	(ha)	183	1,311	414	1,500	0	0	3,408	7,177	8,065	2,701	17,943	19,200	9,200	11,700	3,400	43,500	43,500	43,500	6,850	11,757	7,435	5,087	31,138	3,110	5,690	306	2,034	1,550	1,590	1,590	14,260	110,270					
Sesame (Cash Crop)	Area	(ha)			1,562	1,503	467	872	4,403					646							30					30	1,286	817	61	228			46	2,438	7,567				
	Yield	(ton/ha)			0.70	0.70	0.70	0.70	0.70	0.45				0.45							1.00					1.00	0.50	0.50	0.50	0.50			0.50	0.50	0.50	0.50			
	Production	(ton)			1,093	1,052	327	610	3,082	289				289							30					30	643	409	31	114			23	1,219	3,807				
Sisal (Cash Crop)	Area	(ha)																																					
	Yield	(ton/ha)																																					
	Production	(ton)																																					
Cotton (Cash Crop)	Area	(ha)			103	82	214	201	600																			39						287	867				
	Yield	(ton/ha)			1.20	1.20	1.20	1.20	1.20																		0.50							0.50	0.50				
	Production	(ton)			124	98	257	241	720																		20						134	400	400				
Sugarcane (Cash Crop)	Area	(ha)																																					
	Yield	(ton/ha)																																					
	Production	(ton)																																					
Total Cash Crops	Area	(ha)	0	0	2,585	1,585	681	1,073	5,924	0	0	0	646	0	0	0	0	0	0	50	0	0	0	0	30	1,325	817	61	456	0	46	2,705	9,355						
Cassava (Food Crop)	Area	(ha)	232	1,436	1,168	3,050	4,632	3,722	14,237					7,167							4,000					7,205	647	706	482			5	315	2,165	34,773				
	Yield	(ton/ha)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	4.94				35,430													6.00	7.00	7.00	7.00			7.00	7.00	7.00				
	Production	(ton)	696	4,309	3,495	9,150	13,895	11,165	42,710	35,430				259,710								43,230					42,000	4,529	4,942	3,440			35	2,205	15,151				
Maize (Food Crop)	Area	(ha)			3,628	3,612	4,485	1,053	12,778												400					4,100	798	2,993	381	3,235			435	7,852	28,101				
	Yield	(ton/ha)			1.50	1.50	1.50	1.50	2.61					1.16													2.90	1.80	1.80	1.80			1.80	1.80	1.80				
	Production	(ton)			5,441	5,418	6,728	15,800	33,387	3,438				1,136							400					11,890	1,436	5,387	703	5,823			783	14,133					
Paddy (Food Crop)	Area	(ha)	571	1,265	102	200			1,938					3,837							600					3,520	684	2,523	460	3,081	1,694	930	9,372	19,267					
	Yield	(ton/ha)	2.00	2.00	2.00	2.00			2.00					2.05												2.30	1.60	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.56				
	Production	(ton)	1,142	2,530	204	400			3,876					7,852							600					8,086	1,096	3,785	690	4,622	3,049	1,395	14,637	29,904					
Sorghum (Food Crop)	Area	(ha)			1,703	672	486	366	3,227					1,152												1,000													
	Yield	(ton/ha)			2.00	2.00	2.00	2.00	2.00					1.02												2,000													
	Production	(ton)			3,405	1,344	973	733	6,454					1,179												2,000													
Sweet Potatoes (Food Crop)	Area	(ha)	155	56					211												100					2,550	445	644	22	444	57	244	1,856	6,266					
	Yield	(ton/ha)	7.00	7.00					7.00					5.89												5.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00				
	Production	(ton)	1,085	395					1,480					9,120							100					15,000	2,222	3,222	109	2,222	285	1,222	9,280	30,800					
Cowpeas (Food Crop)	Area	(ha)	67	12	906	312	420	362	2,079												600					5	638	594	34	411			39	1,717	4,401				
	Yield	(ton/ha)	0.70	0.70	0.70	0.70	0.70	0.70	0.70																	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50				
	Production	(ton)	47	8	633	218	294	253	1,454												600					5	319	297	17	206			20	859	2,260				
Total Food Crops	Area	(ha)	1,025	2,770	7,503	7,646	10,023	5,503	34,470	0	0	0	16,675	0	0	0	0	0	0	5,700	0	0	0	0	19,380	3,212	7,460	1,398	7,172	1,756	1,963	22,961	99,186						

Source: District Agricultural Officers, JICA study team estimates

Table 3.3.4 Seasonality of Supply of Fruit and Vegetables in Producing Regions

Product	Production Period	Peak Season Supplied		
		Northern Highland Zone	Southern Highland Zone	Coastal Zone
<u>Vegetables</u>				
Leaf Vegetable	A			
Beans	A	Ki'n:9-12		
Irish Potato	A	Ki'n: 9-2	Irin:3-7	
Tomatoes	A	Aru: 7-9 Ki'n: 8-2		Moro:8-12
Onions	A	Aru:7-9 Ki'n:8-12	Mbeya:7-10 Irin:4-12	Moro: 8-11
Carrots	A	Ki'n:8-10		
Cabbage	A	Ki'n:8-12	Irin:4-12	Moro:6-8
Cauliflower	A			
Chillies	A	Aru:2-7		
Egg Plant	A	Aru:5-8 Ki'n:8-12	Mbeya:11-5	
<u>Tropical Fruits</u>				
Passion Fruit	B	Ki'n: 8-3		
Pawpaw	B	Ki'n:9-11 Tanga:9-11		Coast:9-12
Ripe Banana	A	Ki'n:9-12 Tanga:9-12		
Oranges	B	Ki'n: 3-7 Tanga: 4-6	Mbeya: 3-8	Moro: 4-8 Coast:4-6
Pinapples	B	Ki'n:11-2 Tanga:11-1		Moro:11-1 Coast:11-12
Mangoes	B	Ki'n:12-2 Tanga:12-2	Mbeya:11-5	Coast:11-1
Avocado	A	Ki'n: 5-7 Tanga: 1-5	Mbeya:11-5	
Tangerines	B		Mbeya:3-8	Moro:4-8 Coast:4-6
<u>Temperate Fruits</u>				
Pears	B		Mbeya:11-5 Irin: 3-4	Moro:2-4
Aples	B		Mbeya:11-6 Irin: 3-4	
Plums	B		Mbeya:11-7 Irin 3-7	Moro:10-1
Peachs	B	Ki'n:11-1	Irin:11-1	Moro: 2-4

Source: JICA Study Team

Note: A=Produced throughout the year; B=Produced seasonally

Ki'n:= Kilimanjaro, Irin:=Iringa, Moro:= Morogoro

Table 3.3.5 Monthly Sources of Fruit and Vegetables at Kariakoo Market

Product	1998										1999															
	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July		
1 Irish Potato	Mb. K'n. Tan.	Mb. K'n. Tan.	Mb. K'n. Tan.	K'n. Tan. Iri.	Mb. K'n. Tan.	K'n. Tan. Mb.	K'n. Tan. Iri. Mb.	K'n. Iri. Mb. Tan.	K'n. Iri. Mb.	Mb. Iri.	Mb. Iri., K'n.	Mb. Iri., K'n.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.
2 Green Banana	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.	Mb. K'n. Mo.
3 Cassava	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.
4 Cocoyams	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.
5 Tomatoes	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.	K'n. DM. Iri.
6 Onions	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.
7 Carrots	Iri., Mo. Ar.	Iri., Mo. Do.,	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.	Iri., Mo. Ar.
8 Green Peas	Tabora	Ar. Tabora	Tabola	Tabola	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.
9 Cabbage	K'n. Iri.	K'n. Mo. Ar.	K'n. Mo. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.	Tan. Ar.
10 Lettuce	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.	Mo. Iri.
11 Cauliflower	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.
12 Chillies	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.	Tan. Mo. Iri.
13 Hot Pepper	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.	Mo.
14 Egg Plant	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast	Mo. DM. Coast
15 Leeks	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.	Tan.
16 Coconuts	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast	Tan. Coast
17 Passion Fruit	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.
18 Lemons	Tan.	Tan. Iri.	Tan.	-	-	Tan.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 Lime	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast
20 Pawpaw	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast
21 Tangerines	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast
22 Ripe Banana	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.	Coast, Mo.
23 Oranges	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast	Coast
24 Pineapples	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast	Mo. Coast

Source: Financial Times Observer; From August 1998 to July 1999

Note: Mb.= Mbeya, Tan.= Tanga, Iri.= Iringa, K'n.= Kilimanjaro, Mo.= Morogoro, Ar.= Arusha, DM= Dar es Salaam

Lin.=Lindi, Mom*= Mombasa, S.Afr*=South Africa, *=Imported

Table 3.3.6 Costs and Margins on Selected Major Vegetables

	Potato	Tomato	Cabbage	Onion
Farmer				
Selling price (a)	45.8	88.9	23.1	75.0
Production cost (b)	12.9	18.6	3.4	11.9
Profit (c)	32.9	70.3	19.7	63.1
c/b	2.5	3.8	5.8	5.3
Wholesaler				
Buying price (d)	45.8	88.9	23.1	75.0
Marketing cost (e)	15.2	35.5	25.0	28.0
Profit (f)	14.0	20.0	28.8	47.0
Selling price (g)	75.0	144.4	76.9	150.0
Rate of margin (f/g)	18.7	13.9	37.5	31.3
Retailer				
Buying price (h)	75.0	144.4	76.9	150.0
Marketing cost (i)	18.3	5.1	1.9	6.3
Profit (j)	23.3	28.2	9.6	213.1
Selling price(k)	120.0	177.7	88.5	369.4
Rate of margin (i/k)	23.3	15.9	10.8	57.7

Source: Marketing Arrangements for Horticultural Produce in Tanzania, 1996

Note: Marketing costs and margin of each potato, tomato, cabbage and onion are between Dar es Salaam and Mbeya, Iringa, Njombe and Rujewa, respectively.

Table 3.3.7 Irrigation Schemes Concerning Coast Region

Name of Irrigation Schemes	Location	Description	Potencial Area	Present Status
1 Bagamoyo Irrigation Development Project (BIDP)	Bagamoyo district along the Ruvu River	It was started in 1986 as a Mini-project Type Technical Cooperation. The project is earmarked for small holder farmers in Bagamoyo District and it is now operating under a Cooperative Farmers Association.	2,000	An experimental farm of 20 ha has been constructed and operated. Pilot farm of 100 ha has been completed.
2 FARUHI/JENETA Irrigation Scheme	Bagamoyo district along the Ruvu River	The project belongs to a private company of FARUHI for rice and other crops production.	4,000	Preliminary investigation has been conducted.
3 Ikwiriri Agriculture Development Project	Ikwiriri in Rufiji district along the Reufiji River Basin	The project is a small scale irrigation project planned by Iranian Gov. for rice production. The project is owned by a Farmers Cooperative Association in Ikwiriri Division.	10,000	The rice production area is about 60 ha.
4 KIGONGONI Prison	Bagamoyo district along the Ruvu River	The project was established by the Prisons Department.	650	No irrigation activities have been taken.
5 KISESE Irrigation Scheme	Kisarawe district along the Kiseke tributary of the Rufiji River	The project is a small scale irrigation project proposed for rice production.	1,500	F/S was completed.
6 MABRUKI Farm	Kibaha district along Ruvu River	The project belongs to a private individual for rice and other crops production.	280	Preliminary investigation has been conducted.
7 MAFIZI NYANI	Kisarawe District	The project is a newly proposed irrigation scheme for rice production.	500	Preliminary investigation has been conducted.
8 MAKURUNGE Irrigation Scheme	Bagamoyo district along the Ruvu River	The project was constructed by MAKURUNGE village in early 70's for rice and other production.	250	The project has been abandoned due to failure of pumps and proper organization.
9 MATIPWILI Irrigation Scheme	Bagamoyo district along the Wami River	The project was constructed by German Gov. in early 70's for rice production.	500	The project has been abandoned due to failure of pumps and proper organization.
10 MATSUSHITA Irrigation Scheme	Bagamoyo district along the Ruvu River	The project belongs to the MATSUSHITA Electrical Company with the objective of producing paddy for thire own consumption.	400	There is no production at the moment.
11 MKOKO Irrigation Scheme	Bagamoyo district along the Wami River	The project was constructed by MKOKO village in early 70's for rice production.	50	The project has been abandoned due to some reasons.
12 MKUU irrigation Scheme	Mkuranga district	The project is a newly proposed irrigation scheme for rice production.	500	Preliminary investigation has been conducted.
13 Mr. FRANCIS MTWALE	Bagamoyo district along the Ruvu River	The project belongs to a private individual for rice production.	50	Preliminary investigation has been conducted.
14 Mzizima Farm	Bagamoyo district along the Ruvu River	The project belongs to a private company to produce paddy, sugarcanes, pineapples, oranges, beans and others.	900	The area under such proposed production is less than the target area.
15 NAFCO-RUVU	Bagamoyo district along the Ruvu River	The project was planned by Chinese Gov. in the Mid-seventies for rice production.	750	The area under production is less than 300 ha.
16 NASIBUGANI Irrigation Scheme	Mkuranga district along Nasibugani River	The project was constructed by Nasibugani village for rice production.	50	The project has been abandoned due to failure of pumps and proper organization.
17 NDUJI Irrigation Scheme	Mafia district along Nduji valley	The project was constructed by holder farmers around NDUJI valley in early 70's for rice and other production.	50	The project has been abandoned due to some reasons.
18 NYAMARONDA Irrigation Scheme	Kisarawe district along the Nyamaronda River	The project is a newly proposed irrigation scheme for rice and other production.	500	Preliminary investigation has been conducted.
19 RUWE irrigation Scheme	Rufiji district along the Rufiji River	The project was constructed by Ruwe village in early 70's for rice production.	60	The project has been abandoned due to flood damages.
20 SIAFCO Irrigation Project	Bagamoyo district along the Ruvu River	The project belongs to a private company of SIAFCO for rice production.	200	The project has been abandoned.
21 UPPER RUVU irrigation Scheme	Kibaha district along Ruvu River	The project is a newly proposed irrigation scheme for rice and other production.	250	Preliminary investigation has been conducted.

Table 3.4.1 Land Use Control in Coast Region

Cultivated Land	National Parks	Nature Reserves	Game Reserves	Forest Reserves	Historical Remains and Archeological Sites, Important Scenery/Landscape for Tourist or Religion
<p>319,000 ha of land suitable for annual crops. 118,000 smallholder farms, with 112,000 ha planted with annual crops. Total area of large farms is 105,333 ha. Small farmers cultivate from mainly customary land tenure systems, which include inheritance, allocation by the village heads, and investment in clearing.</p>	<p>Coast Region has no terrestrial National Park. Nearest National Park is Mikumi found in Morogoro Region, absent 123 km from Morogoro Town, on the highway towards Iringa. The Park harbours diverse flora and fauna including herds of Elephants, Buffaloes, Wildbeasts, Impalas, Hartebeasts, Lions, Leopards, etc. Bird life is also enormous.</p>	<p>Two types of reserve exist in Tanzania: Game Reserves and Forest Reserves. In both cases residence and utilization within these areas are strictly controlled by Director of Forestry and Beekeeping (DFOB) in case of Forest Reserve and Director of Game/Wildlife (DW) in case of Game Reserves</p>	<p>Coast Region has a single Game Reserve within its boundary: Saadani Game Reserve located in Bagamoyo. Area is 300 km². Excellent site for beach activities due to the Indian Ocean bordering it in the Eastern side. Reserve is important for its variety of herbivores including: Elephants, Buffaloes, Elands, Hartebeests, Wildebeests, Bushbucks, Reedbucks, Warthogs+Bushpigs. Primates including Monkeys, Baboons, Bushbabys, etc. are also present. Different species of birds including Hammer Kops, Helmeted Guinea Fowls, Francolins, Spurfowls, Quails, Lesser Bustards Plovers, Sandgrouses, Pigeons, Doves, Wood-doves, Cuckoos, Rollers, Ground-hornbills, Owls, Night-jars, Wood Peckers, Honey-guides swifts and other species under the order of Passeriformese can be seen.</p> <p>Wami River originating from Morogoro Region borders the Reserve on the South Eastern side + harbours variety of not only fresh water fishes but also one of largest Mammals, the Hippotames, largest water reptiles, the Nile Crocodile and water birds.</p> <p>Apart from Saadani Game Reserve, Coast Region covers a part of Selous Game Reserve. The latter is found within five (5) Regions (Namely Coast, Morogoro, Lindi, Mtwara and Ruvuma) with nine (9) districts (Namely Kisarawe, Morogoro, Rufiji, Kuosa, Mahenge, Kilwa, Nachingwea, Tunduru and Tongea)</p>	<p>The forests are those classified as coastal forests. Most of these forests have been completely cleared like the Mkuranga sacred forest grove, and turned into farmlands, some of which have later been abandoned to develop into coastal bush land</p> <p>The important forest reserves in the region include Vikindu, Kazimzumbwi, Pugu, in Kisarawe; Kisiju in Mkuranga; Kiwengoma, Mchungu and Kikale in Rufiji. These forests are important in having some endemic or medicinal plants species. The Zaraninge/Kiono Forest Reserve in Bagamoyo district served also as a Game Reserve.</p> <p>Coast Region has 35 Forest Reserves covering a total area of more than 2,880 km² (288, 000 ha) divided in districts as follows: 1) Bagamoyo – Six (6) F/Reserves covering a total of 34,973 ha; 2) Kibaha – One (1) F/Reserve with a total of 31, 930 ha; 3) Kisarawe – Six (6) F/Reserves with a total of 49,001 ha; 4) Mafia – One (1) F/Reserve (Mangroves) with a total of 4,047 ha; 5) Mkuranga – One (1) F/Reserve with a total of 1,599 ha; 6) Rufiji – Twenty (20) F/Reserves with a total of 166,634 ha.</p> <p>The Reserves were set aside primarily for safeguarding of catchment areas, biodiversities and prevention of erosion on vulnerable areas.</p>	<p>The antiquities resources of Tanzania encompass archeological sites, historic towns, monuments and artifacts or relics. In the Coast Region however, there are no antiquities sites listed as a World Heritage, but towns with historical quarters exist in all the districts of the region. These towns are mainly located in the coastline, which has experienced in the past several human settlements that left behind an important amount of monuments and relics from the prehistoric era or even from a more recent era.</p> <p>The Region has consequently spectacular areas for tourists particularly along the coast. Bagamoyo District Headquarters found along the coast of Indian Ocean is the town with interesting phenomena: 1) it is an archeological site where human history and development can be learned from Arab-Slavery era, German + British rules. Bagamoyo was a center of 19th Century notorious Slave trade, the last destination in Africa where most captives saw before being sold and shipped to Arabian + Persian Gulf. Kaole Ruins located 2 – 3 km from Bagamoyo town tells a lot about Arabs; 2) it has an ancient architectural Monument which depicts human ability to design;</p>

Table 3.4.1 Land Use Control in Coast Region (continued)

Game Reserves (continued)	Historical Remains and Archeological Sites, Important Scenery/Landscape for Tourist or Religion (continued)
<p>The Reserve covers an area of 50,000 km² and is one of the largest Reserves in the World. It harbours diverse fauna and flora. Some large animals include Elephants, Elands, Buffaloes, Hippos, Wildebeests, Hartbeests, Impalas, Warthogs, Bushpigs, Porcupines, Aardvarks, Bushbucks, Reedbucks, Waterbucks, Hares, Velvet Monkeys, Bushbabys, Baboons, Crocodiles (Crocodylus Niloticus), Lions, Hyacenas, Leopards, Wild cats, Great + Lesser Kudus, Sable Antelopes, Pulru, Black Rhinoceros, Giraffes, Steinboks, Dikdiks, etc. Birds and snakes of different species are also present.</p> <p>The Reserve is famous for Tourist hunting whereby tourists are allowed to take their trophies after paying foreign money during hunting trips.</p>	<p>3) it has got a number of comparable beaches which has attracted investors in developing tourist hotels.</p> <p>Apart from Bagamoyo town, Saadani Game Reserve found within the same district offers a combination of animals and beach area where a lot of tourist undertakings can be carried out. Saadani is also an international breeding site for marine turtles.</p> <p>Another area of tourist importance is Mafia Island, which covers one of the finest complexes of estuarine mangrove, coral reef and marine channel ecosystem in the World. The Island provided home to some of the highest diversity of marine species including coral reefs, fish, mangroves, sea grass, algae and growth form of sponges.</p> <p>The island provides feeding grounds for wading birds including some of the most important nesting areas for Open-billed stork and Fish Eagles. In addition, the island harbours one of the largest colonies and probably the newest subspecies of the fruit Bat, <u>Pteropus Comorensis</u>, in the coastal areas of the West Indian Ocean. Furthermore, the island's Coral reefs offer some of the best snorkeling and scuba diving in the region.</p> <p>Despite these resources, tourism has not been fully developed. The island is accessible either by means of water or air. Its communication facilities are extremely poor. The air's trip is poorly developed, therefore seasonal. In addition only few can afford it. Water transport is cheaper and therefore affordable by mass. Its safety is questionable due to outmoded vessels being used. Consequently both water and air navigations are unreliable making tourism least important undertaking.</p> <p>Despite the short comings, the island is frequented by tourists and they are served by best facilities offered by Mafia Island Lodge and several tourist camps like Kirasi, Dolphin and others.</p>
<p>However, the Northern part of the Reserve is exclusively used for visual and photographic tourism. Hence, luxurious camps have been developed by investors to cater for tourists services</p> <p>The Selous Game Reserve was declared a 'World Heritage Site' by the United Nations in 1982.</p>	<p>Of recent development, Mafia Island Marine Park has been developed. Unlike other National Parks in Tanzania, which are terrestrial and used exclusively for visual, photography, camping, site seeing and scientific research, the Park also offers utilization of the resources within the Park on sustainable basis. The good point is that it involves local communities and other stakeholders within the area in decision-making + sharing benefits derived from the Park.</p> <p>Another area of tourist importance is Selous Game Reserve (already mentioned above). The mass of land offers tourist activities of all forms, - sport hunting, site seeing, photographic hunting, boating, etc.</p> <p>Rufiji Delta found on the mouth of Rufiji River where it enters the ocean offers excellent spectacular site. It is a site of largest tidal (Mangrove) forest on the eastern Coast of Africa. These mangroves support an extensive inter-tidal fishery, provide nursery grounds for a nationally important prawn industry, and produce large quantities of mangrove poles for export. Over 150,000 people inhabit the Delta and floodplain, the majority of whom subsist on fishing, cultivation and extraction of forest, woodland and wetland products</p>

Table 3.4.2 Locations of Environmentally Vulnerable Areas

Mangrove Forests	Coral Reefs	Wetlands
<p>These are found along the Coast on four of the total six districts of the Region: 1) Rufiji District – The forest covers 40,460 ha; 2) Mafia District – The forest covers 4,047 ha; 3) Mkuranga District – The forest covers 3,448 ha; 4) Bagamoyo District – The forest covers 1,499 ha.</p> <p>Note that according to Forest Ordinance Cap 389 of 1959, Mangroves are Forest Reserves and cannot be used without the consent of Director of Forestry and Beekeeping (DFOB)</p>	<p>Bagamoyo and Mafia island have considerable marine water areas with coral and coral reefs. This is justified by incidences of dynamiting in the area.</p>	<p>Three important rivers are found within the region. The rivers are:</p> <ul style="list-style-type: none"> - Wami River whose water flows across many parts of Bagamoyo. - Ruvu River flows across Kibaha and Bagamoyo districts. - Rufiji River flows across Rufiji district. <p>They form wetlands, which are used mainly for paddy and fishery. These rivers have good population of Nile crocodiles and Hippos (<i>Hippopotamus Amphibius</i>)</p>

Table 3.4.3 Endangered and Valuable Animals and Plant Species

<ol style="list-style-type: none"> 1. Black Rhinoceros: Rarely seen but found in Selous Game Reserve and is one of the endangered species 2. Wild dogs: These have been spotted in recently developed ‘‘WAMI-MBIKI Community based Conservation Area found in both Bagamoyo and Morogoro Districts. Pack of about 30 animals has been encountered and listed as an endangered species 3. African Elephant: Also an endangered species. Herds of them are found in Kibaha, Rufiji, Bagamoyo and Kisarawe Districts 4. Nile Crocodile: Found in rivers of Wami, Rufiji and Ruvu. The population is considerably high. The reptile is listed under vulnerable species 5. Pangolins: Listed under endangered species. Found all over the Region 6. Plant Species: Little information is available on plant species, but the information contained in CFR Program – Status reports for 11 Coastal Forests in Coast Region may be of paramount importance in understanding biodiversity endemism of flora and fauna in those areas.

Table 3.4.4 Environmentally Sensitive Areas (ESAs) and Ecosystems

1. Areas prone to natural disasters (geological hazards, floods, rain – storms, earthquakes, landslides, volcanic activity, etc.).
2. Wetlands:
(Flood plains, swamps, lakes, rivers etc). Water bodies characterized by one or any combination of the following conditions.
 - (a) Tapped for domestic purposes; brick making;
 - (b) Within the controlled and/or protected areas;
 - (c) Which support wildlife and fisheries activities;
 - (d) Used for irrigated agriculture, livestock grazing
3. Mangrove swamps characterized by one or any combination of the following conditions:
 - (a) With primary pristine and dense growth;
 - (b) Adjoining mouth of major river systems;
 - (c) Near or adjacent to traditional fishing grounds;
 - (d) Which act as natural buffers against shore erosion strong winds and storm floods
4. Areas susceptible to erosion e.g.:
 - (a) Hilly areas with critical slopes
 - (b) Unprotected or bare lands
5. Areas of importance to threatened cultural groups.
6. Areas with rare/endangered/or threatened plants and animals.
7. Areas of unique socio – cultural, history, archaeological, or scientific importance and areas with potential tourist value.
8. Polluted area.
9. Area subject to desertification and bush fires.
10. Coastal areas and Marine ecosystems:
 - ◆ Coral reef
 - ◆ Islands
 - ◆ Lagoons and estuaries
 - ◆ Continental shelves
 - ◆ Beach fronts etc.
 - ◆ Inter–tidal zones
11. Areas declared as:
National park, Watershed reserves, forest reserves, wildlife reserves and sanctuaries, sacred areas wildlife corridors, hot – spring areas.
12. Mountainous areas, water catchment areas and recharge areas of aquifer:
(Flood plains, swamps, lakes, rivers etc). Water bodies are characterized by one or any combinations.
13. Areas classified as prime agricultural lands or rangelands.
14. Green belts or public open spaces in urban areas.
15. Burial sites and graves

Table 5.1.1 Recommended Farming Practices and Labour Requirement for Major Vegetables

Tomato

Farming Practices	Rate (Acre)	Labour (MD)	Month																								
			May	June	July	August	September	October																			
Nursery																											
Nursery preparation (10 sq.m)	0.5			⊗																							
Seeding	125 g	0.5		⊗																							
Thinning	1.0			⊗																							
Watering	5.0			.....																						
Main Farm																											
Organic manure application	5 ton	10.0		⊗																							
Ploughing	10.0			⊗																							
Harrowing	8.0			⊗																							
Land cleaning and smoothing	5.0			⊗																							
Holing	1.0			⊗																							
Basal dosage (DAP)	100 kg	2.0		⊗																							
Transplanting (100cm x 50cm)	5.0			■																							
Mulching	1.0			⊗																							
Weeding	30.0			.....																						
Top-dressing (CAN)	40 kg	1.0			⊗																						
Top-dressing (CAN)	80 kg	2.0			⊗																						
Pruning	2.0					⊗																					
Watering	60.0			.....		.....																		
Spraying	15.0			.....		.....																		
Staking	10.0						⊗																				
Harvesting	30.0						.....	.....	.....															
Total Labour Requirement	199.0		0.5	1.3	0.8	6.8	5.8	##	##	##	4.6	8.9	9.9	8.9	8.9	##	8.9	6.6	##	4.6	6.7	6.7	6.7	6.7	3.3	3.3	
Family Labour Available (3.6/hh)	504.0		##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##
Hired Labour Requirement	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Note: The table shows the farming calendar for the earliest cropping pattern.

Cucumber

Farming Practices	Rate (Acre)	Labour (MD)	Month																							
			September	October	November	December	January	February																		
Main Farm																										
Organic manure application	5 ton	10.0		⊗																						
Ploughing	10.0			⊗																						
Harrowing	8.0			⊗																						
Land cleaning and smoothing	5.0			⊗																						
Basal dosage (DAP)	100 kg	2.0		⊗																						
Direct Sowing	200 g	1.0		■																						
Mulching	1.0			⊗																						
Weeding	30.0			.....																					
Top-dressing (CAN)	80 kg	2.0			⊗																					
Watering	30.0			.....		.....																	
Spraying	15.0			.....		.....																	
Harvesting	30.0						.....	.....	.....														
Total Labour Requirement	144.0		##	0.0	##	8.0	9.0	8.0	6.7	##	8.0	8.0	8.0	4.2	4.2	7.7	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Family Labour Available (3.6/hh)	360.0		##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##
Hired Labour Requirement	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Note: Sowing can be done from June to October.

Okra

Farming Practices	Rate (Acre)	Labour (MD)	Month																							
			May	June	July	August	September	October																		
Main Farm																										
Organic manure application	5 ton	10.0		⊗																						
Ploughing	10.0			⊗																						
Harrowing	8.0			⊗																						
Land cleaning and smoothing	5.0			⊗																						
Basal dosage (DAP)	100 kg	2.0		⊗																						
Direct Sowing	600 g	1.0		■																						
Mulching	1.0			⊗																						
Weeding	15.0			.....																					
Top-dressing (CAN)	80 kg	2.0			⊗																					
Watering	30.0			.....		.....																	
Spraying	15.0			.....		.....																	
Harvesting	45.0						.....	.....	.....														
Total Labour Requirement	144.0		##	0.0	##	8.0	7.1	6.1	4.8	8.1	6.1	6.1	6.1	4.2	4.2	7.7	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Family Labour Available (3.6/hh)	414.0		##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##
Hired Labour Requirement	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Note: The table shows the farming practices for improved varieties. For local varieties, harvest can continue for 3 months, if no diseases occur.

Eggplant

Farming Practices	Rate (Acre)	Labour (MD)	Month																												
			May	June	July	August	September	October																							
Nursery																															
Nursery preparation (10 sq.m)	0.5			⊗																											
Seeding	125 g	0.5		⊗																											
Thinning	1.0			⊗																											
Watering	5.0			.....																										
Main Farm																															
Organic manure application	5 ton	10.0		⊗																											
Ploughing	10.0			⊗																											
Harrowing	8.0			⊗																											
Land cleaning and smoothing	5.0			⊗																											
Holing	1.0			⊗																											
Basal dosage (DAP)	100 kg	2.0		⊗																											
Transplanting (90cm x 60cm)	5.0			■																											
Mulching	1.0			⊗																											
Weeding	50.0			.....																										
Top-dressing (CAN)	40 kg	1.0			⊗																										
Top-dressing (CAN)	80 kg	2.0			⊗																										
Pruning	2.0					⊗																									
Watering	80.0			.....		.....																						
Spraying	15.0			.....		.....																						
Harvesting	30.0						.....	.....	.....																			
Total Labour Requirement	229.0		0.5	1.1	0.6	0.6	1.6	0.6	##	##	8.6	##	5.2	8.7	8.7	8.7	##	8.7	8.7	##	8.7	8.7	7.6	7.6	##	8.3	8.3	8.3	4.3	4.3	
Family Labour Available (3.6/hh)	504.0		##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##	##
Hired Labour Requirement	0.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Note: Harvest can continue for 4 months from the end of September, if no diseases occur.

Source: JICA Study Team

Table 5.2.1 Development Approaches for Solving the Problems

No.	Approach Title	Target Group	Activities	Executing Bodies	Farmers' Participation
	Agricultural Extension Service Reinforcement Approach	Ward Extension Officers (WEOs) and Village Extension Workers (VEOs)	Review of agri. extension guideline including selection of horticultural crops & varieties and farming techniques suited to Coast Region, skill training for extension workers, provision of training materials, provision of transportation facilities to extension workers, etc.	Ministry of Agriculture and Cooperatives (MOAC), Coast Region and District Offices	Training program under T&V system
	Watering Method Improvement Approach	Farmers	Site inspection, selection of suitable watering method, application of credit for procurement of equipment if necessary, technical transfer to VEOs & farmers, etc.	MOAC-Morogoro Zone Office, Coast Region and District Offices, NGOs	PRA, training programme
	Horticulture Farming Technique Improvement Approach	Farmers	Farmers' group formation, identification of constraints, credit for procurement of inputs, extension to farmers, group marketing, environmental conservation measures, etc.	Coast Region and District Offices, NGOs	PRA, training programme
	Community Development and Leaders Training Approach	Farmers	Organization of farmers groups, transfer of knowledge for participatory planning and project implementation, staff and farmers training on administration and logistics, etc.	Coast Region and District Offices, NGOs	PRA, training programme
	Group Marketing and Farm Inputs Procurement Approach	Farmers	Organization of farmers groups, staff training, inputs credit, production and distribution of fruit tree seedlings, transportation management, market monitoring, etc.	Farmers group, NGOs	PRA, training programme
	Crop Diversification Approach	Farmers	Research for horticultural crops suited to Coast Region, standardization of farming practices and inputs, etc.	MOAC-Research Station, Coast Region and District Offices	Training programme
	Feeder & Rural Roads Improvement Approach	Coast Region & Districts Office	Procurement of O&M equipment, road maintenance	District Offices and Farmers' group	Farmers' Participation
	Capacity-building of District Offices & Officers Approach	Coast Region & Districts Office	Training of district officers and equipping district offices	Coast Region and District Offices	Farmers' Participation
	Farmers Training & Education Approach	Farmers	Awareness creation, group forming, WID, skill training	MOAC, Coast Region, District Offices, NGOs	PRA, Training programme

Table 5.3.1 Community Based Horticulture Development Programme (PDM)

Input Credit Programme

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal Farm income of small farmers is increased.			
Project Purpose Production and profitability of vegetables are improved.			Living expenses are not drastically increased.
Outputs 1. Farmers groups are organized. 2. Farming practices and farm input applications are done as planned. 3. Group marketing is smoothly done with least post harvest losses.	Farmers are involved in the group activities. Input credits are applied and disbursed properly. Vegetables are planted as scheduled and maintained. Crop yield and production are improved. Marketing of produce and procurement of farm inputs are done by group.	Problem tree, Objective tree, PDM, Action plan Meeting record, Attendance rates, Contribution to the group, etc. Yield records, Farm operation records, Marketing records Credit operation records Accounting books of groups	Natural calamities don't happen. Marketing system in public markets in Dar es Salaam is not drastically changed. Prices of vegetables are not drastically decreased.
Activities 1-1 Farmers recognize and identify the problems facing them. 1-2 Farmers discuss and make consensus how to solve problems. 1-3 Farmers prepare an action plan for group activities. 1-4 Farmers organize a group. 1-5 Farmers apply input credit. 2-1 Prepare farm operation plans. 2-2 Group procures farm implements and tools. 2-3 Select recommended farm input and standard application rates. 2-4 Group procures farm input. 2-5 Farmers carry out farming practices as scheduled. 3-1 Harvest crops on time according to the operation plan. 3-2 Select and procure packing materials to meet the wholesalers' requirements.	Inputs Donor Personnel 1) Project leader (farm management) 2) Participatory development expert 3) Horticulture expert Equipment 1) Portable pumps for irrigation 2) Knapsack-type sprayers 3) Weighing scales Facilities 1) Multi-purpose shed for training, workshop and farmers meeting 2) Office space 3) Store for the equipment mentioned above Input Credit 1) Provision of seeds, fertilizers on credit basis 2) Consignment stock of pesticides for emergency use	Tanzania Personnel 1) Project manager 2) Coordinator Local Cost Project implementation and management cost.	Agricultural extension services are operated under NAEP II No credit scheme with softer conditions will be introduced to the Region. Preconditions Farmers are willing to participate in the group activities. Land owners do not obstacle the project.

Table 5.3.2 Preliminary Crop Budget for Estimate of Input Credit

1. Standard Application Rate (per Acre)

Input	Particular	Unit	Tomato	Cucumber	Eggplant	Okra
a. Seeds		g	100	200	100	500
b. Organic Manure		ton	4	4	4	4
c. Fertilizers	UREA	kg	50	50	50	50
	CAN	kg	100	100	100	100
d. Fungicide	Mancozeb	kg	3	0	0	0
	Copper Compoun	kg	0	3	3	1
e. Insecticide	Cyhalothrin	kg	1	1	1	1
f. Stacking rope		bundle	5	0	0	0
g. Poles		no.	1,600	0	0	0
h. Hired Labour		man-day	3	3	3	3

2. Production Cost (per Acre)

Input	Particular	TShs./ Unit	Tomato	Cucumber	Eggplant	Okra
a. Seeds		TShs. /kg	60	40	30	36
			6,000	8,000	3,000	18,000
b. Organic Manure		8,000	32,000	32,000	32,000	32,000
c. Fertilizers	UREA	300	15,000	15,000	15,000	15,000
	CAN	300	30,000	30,000	30,000	30,000
d. Fungicide	Dithene M45	10,000	30,000	0	0	0
	Blue Copper	3,500	0	10,500	10,500	3,500
e. Insecticide	Karate	30,000	30,000	30,000	30,000	30,000
f. Stacking rope		800	4,000	0	0	0
g. Poles		10	16,000	0	0	0
f. Hired Labour		500	1,500	1,500	1,500	1,500
Total Cost		TShs.	164,500	127,000	122,000	130,000
1)Seed+Fertilizers		TShs.	51,000	53,000	48,000	63,000
2)Pesticide		TShs.	60,000	40,500	40,500	33,500
3)Others		TShs.	53,500	33,500	33,500	33,500

3. Cost & Return (per Acre)

Category	Particular	Unit	Tomato	Cucumber	Eggplant	Okra
Anticipated Yield	(1)	kg	6,000	5,000	5,000	5,000
Marketable amount	(2)=(1) x 60%	kg	3,600	3,000	3,000	3,000
Unit Price	(3)	TShs/kg	120	80	70	70
Gross Revenue	(4)=(3)x(2)	TShs.	432,000	400,000	350,000	350,000
Total Cost	(5)	TShs.	164,500	127,000	122,000	130,000
Net Return	(6)=(4)-(5)	TShs.	267,500	273,000	228,000	220,000

Table 5.4.1 Participatory Development Capacity Building Programme (1/16)

Programme	1. Training for District and Extension Officers															
Sub-Programme	1-1 Preparation of Training Materials															
Target Group	District Officers and Extension Officers															
<p>Objectives:</p> <p>This sub-programme aims at preparation of training materials, which will be used throughout the Participatory Development Capacity Building Programme. The texts and materials to be prepared include;</p> <ul style="list-style-type: none"> Booklets on the national policies for agricultural and rural development and poverty Booklets on current agricultural positions in Coast Region, which were clarified through the JICA master plan study on Small Scale Horticultural Development for Poverty Alleviation to Farmers in Coast Region List of projects and programs in Coast Region promoted by international agencies, donor countries and NGOs Guideline prepared through the JICA master plan study on Small Scale Horticultural Development for Poverty Alleviation to Farmers in Coast Region Videos on PCM and PRA (operation manuals) Posters and leaflets for promotion of participatory rural development Video episode and booklets on successful group activities in poverty alleviation in Tanzania Farm management handbook on environment-friendly horticultural production Explanation note on gender issues 																
<p>Activities:</p> <p>The above-mentioned texts and training materials will be prepared around the following concepts. Some 500 copies will be produced for each material.</p> <p>The Regional Commissioner's Office will take responsibilities for preparation of texts and training materials in association with donors, Ministry of Regional Administration and Local Government (MRALG) and Ministry of Agriculture and Cooperative (MAC).</p> <p>Information accumulated through the JICA study will be fully incorporated into the materials. Past training materials prepared by donors and NGOs in the past will fully be utilized in the training programme. However, the training materials to be prepared under this sub-programme will be more pragmatic and provide more information to clarify tasks and duties of district officers and extension officers.</p>																
<p>Inputs: Donor side</p> <table border="0"> <tr> <td>Institutional Expert (Team Leader)</td> <td>6 M/M</td> </tr> <tr> <td>Participatory Development Specialist</td> <td>3 M/M</td> </tr> <tr> <td>Horticulture Expert</td> <td>1 M/M</td> </tr> <tr> <td>Computer and printer</td> <td>2 sets</td> </tr> <tr> <td>Photo-copy machines</td> <td>2 units</td> </tr> <tr> <td>Video camera, video players and</td> <td></td> </tr> <tr> <td>TV sets</td> <td>2 units</td> </tr> </table>		Institutional Expert (Team Leader)	6 M/M	Participatory Development Specialist	3 M/M	Horticulture Expert	1 M/M	Computer and printer	2 sets	Photo-copy machines	2 units	Video camera, video players and		TV sets	2 units	<p>Inputs: Tanzanian side</p> <p>Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc.</p> <p>Translator English-Kiswahili</p>
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Computer and printer	2 sets															
Photo-copy machines	2 units															
Video camera, video players and																
TV sets	2 units															
<p>Time Schedule: 1st to 6^h month (6 months)</p>																
<p>Expected Outputs:</p> <p>Training materials of a wide range of aspects concerning participatory horticultural development</p> <p>Capacity building for district officers and extension officers</p>																

Table 5.4.1 Participatory Development Capacity Building Programme (2/16)

Programme	1. Training for District and Extension Officers											
Sub-Programme	1-2 Seminars and Workshops											
Target Group	District Officers and Extension Officers (group leaders of communities)											
<p>Objectives:</p> <p>Seminars and workshops will be held for the following subjects.</p> <p>National policies on agricultural and rural development and poverty eradication and their actual progress as well as development constraints against horticulture in Coast Region</p> <p>Participatory development approach and its concept, methodology & procedures</p> <p>Current positions and future prospects of horticultural development in Tanzania as well as Coast Region</p> <p>Training materials to be prepared in Sub-programme 1-1 will fully be applied in this sub-programme.</p>												
<p>Activities :</p> <p>It is proposed that the existing 137 district officers and 157 extension officers will participate in the seminars and the workshops, at least one of three subjects mentioned above.</p> <p>Lecturers will be selected among the existing superintendent staff in regional and district levels as follows</p> <table border="0"> <tr> <td>Mr. A.H. Mwenkalley (RALDO)</td> <td>: Horticulture and future prospect</td> </tr> <tr> <td>Mr. P. Minja (Regional Planning Officer)</td> <td>: Rural development and poverty alleviation</td> </tr> <tr> <td>Mr. M.B. Twenye (Regional Cooperative Officer)</td> <td>: Cooperative activities</td> </tr> <tr> <td>Mrs. E.S. Mwashu (DEO, Kibaha)</td> <td>: PRA</td> </tr> </table> <p>Seminars will be held at district level.</p> <p>Lectures will be assigned mainly by Tanzanian side with necessary supports by donors</p> <p>Seminars will provide not only lectures but also free-discussion by all attendants</p>			Mr. A.H. Mwenkalley (RALDO)	: Horticulture and future prospect	Mr. P. Minja (Regional Planning Officer)	: Rural development and poverty alleviation	Mr. M.B. Twenye (Regional Cooperative Officer)	: Cooperative activities	Mrs. E.S. Mwashu (DEO, Kibaha)	: PRA		
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<p>Inputs: Donor side</p> <table border="0"> <tr> <td>Institutional Expert (Team Leader)</td> <td>12 M/M</td> </tr> <tr> <td>Participatory Development Specialist</td> <td>12 M/M</td> </tr> <tr> <td>Horticulture Expert</td> <td>12 M/M</td> </tr> <tr> <td>4WD Vehicles</td> <td>2 units</td> </tr> <tr> <td>Video players and TV sets (including one mobile unit)</td> <td>6 units</td> </tr> </table>		Institutional Expert (Team Leader)	12 M/M	Participatory Development Specialist	12 M/M	Horticulture Expert	12 M/M	4WD Vehicles	2 units	Video players and TV sets (including one mobile unit)	6 units	<p>Inputs: Tanzanian side</p> <p>Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc.</p> <p>Translator English-Kiswahili</p>
Institutional Expert (Team Leader)	12 M/M											
Participatory Development Specialist	12 M/M											
Horticulture Expert	12 M/M											
4WD Vehicles	2 units											
Video players and TV sets (including one mobile unit)	6 units											
<p>Time Schedule: 2nd to 21st month (20 months)</p>												
<p>Expected Outputs:</p> <p>Capacity building in wide range of aspects concerning participatory horticultural development</p> <p>Technical and administrative knowledge around the Project will be accumulated among district officers and extension officers</p>												

Table 5.4.1 Participatory Development Capacity Building Programme (3/16)

Programme	1. Training for District and Extension Officers	
Sub-Programme	1-3 Training Courses for PCM Moderators and PRA Facilitators	
Target Group	District Officers, e.g. DALDO, DEO, Subject Matter Specialists	
<p>Objectives:</p> <p>It is expected that local farmers will be empowered under the Small Scale Horticultural Development Project in Coast Region (the Project). Encouraged with substantial achievement of increased horticultural production, farmers will make more self-efforts to solve other problems and improve their living standard through the bottom-up development approach. It is proposed to continue the participatory community planning for poverty alleviation and the project monitoring in line with the PCM workshop and PRA conducted within the framework of the JICA study. In order to meet this requirement, some 20 officers will be trained up for PCM moderators and PRA facilitators.</p>		
<p>Activities:</p> <p>Within the first year after commencement of Action Plan, five (5) officers of Coast Region and 15 district officers (three officers for each of five districts) will be trained up.</p> <p>Lectures will be assigned by either donors or NGOs. Such NGOs as Swissaid Tanzania and Plan International have accumulated long experiences in grass-root activities with local initiatives in Coast Region. These NGOs will be important resources of ZOPP/PRA specialists for relevant training courses.</p> <p>The training courses consist of indoor lectures in the Regional Commissioner's Office in Kibaha and On-the-Job Training (OJT) at district level.</p> <p>Some of senior staffs of the Region and Kibaha District were trained with ZOPP and a basic knowledge of PCM/PRA. This sub-programme will also request these staffs to participate in the training courses.</p>		
<p>Inputs: Donor side</p> <p>Participatory Development Specialist 10 M/M 4WD Vehicles 2 units PCM/PRA specialists from NGOs and local consultants 6 M/M</p>		<p>Inputs: Tanzanian side</p> <p>Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc. Translator English-Kiswahili</p>
<p>Time Schedule: 3rd to 10th month (8 months)</p>		
<p>Expected Outputs:</p> <p>20 PCM/PRA specialists are trained up and available at regional and district levels. Promotion of agricultural and rural development through the bottom-up approaches.</p>		

Table 5.4.1 Participatory Development Capacity Building Programme (4/16)

Programme	1. Training for District and Extension Officers	
Sub-Programme	1-4 Skill Training of Horticultural Farming Techniques	
Target Group	Extension Officers and Group Leaders (Key Farmers)	
Objectives:		
<p>Training of extension officers are conducted under National Agricultural Extension Programme II (NAEP II 1996-2001) assisted by IDA. Since horticulture is not the main subject of NAEP II, horticultural specialists are not trained among extension officers compared with specialists both for food crops and traditional crops. In addition, due mainly to lack of local government budget, no research activities for horticultural crops are executed in Coast Region. Under such conditions, the farming technology of horticultural crops is not standardized yet in the Region.</p> <p>This sub-programme aims at selection of standard farming techniques for horticultural crops and intensive training of essential horticultural farming technology to extension officers, i.e. Ward Extension Officer (WEO) and Village Extension Officer (VEO), as well as key farmers (group leaders).</p>		
Activities:		
<p>The sub-programme will be organized mainly at the District Seedling Farms (DSF), which are proposed under the Project. The DSF will be established to raise and distribute young seedling of fruits trees of qualified varieties and to carry out trial planting with horticultural crops in order to confirm crop (variety) suitability and to select farming techniques suited to local conditions. It is also proposed to keep a close coordination with Sokoine University of Agriculture (SUA, Department of Crop Science & Production) to obtain new varieties of horticultural crops and rationalise the research activities. Trial planting at the DSF is supplemented by simple cropping tests at selected villages. On the basis of the research results, a standard farming practices for each vegetable will be set up and transferred to local farmers through the existing extension channels.</p> <p>Apart from farming techniques, a know-how of financial management will also be transferred to farmers by extension officers and key farmers (group leaders). Main activities proposed under this sub-programme include:</p> <ul style="list-style-type: none"> Technical training through demonstration farming at the DSF Seminars on environmental conservation practices, e.g. appropriate usage of pesticides and chemical fertilizers, soil and moisture conservation, etc. Educational tours to Sokoine University of Agriculture, leading horticultural regions, e.g. Tanga, Iringa, Moshi, etc. and public markets in Dar es Salaam Educational tours to small agro-processing plants, cooperatives' vegetable sorting facilities and cold storages in Dar es Salaam for export-oriented crops Lectures on farm management planning including preparation of cropping schedule, break even analysis on the basis of crop budget, price mechanism of horticultural crops, etc. 		
Inputs: Donor side		Inputs: Tanzanian side
Horticulture Expert	12 M/M	Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc.
4WD Vehicles	2 units	Translator English-Kiswahili
Crop research equipment, water quality analysis kit, soil survey equipment, etc.	1 unit for each	
Time Schedule: 3 rd to 14 th month (12 months)		
Expected Outputs:		
<p>Improvement of farming techniques among extension officers and key farmers (group leaders)</p> <p>Close relationship between extension officers and key farmers (group leaders) for improvement of communication channels within the rural societies</p>		

Table 5.4.1 Participatory Development Capacity Building Programme (5/16)

Programme	1. Training for District and Extension Officers											
Sub-Programme	1-5 Training for Management Techniques of Community-Based Horticultural Development Programme											
Target Group	District Officers with selected Regional Officers											
<p>Objectives:</p> <p>The sub-programme aims at capacity building for reliable and smooth project management of Community-Based Horticultural Development Programme. The main aspects to be dealt with under the sub-programme include:</p> <ul style="list-style-type: none"> Community Action Planning by PRA Operation plan and budgetary arrangement for the proposed Input Credit scheme Operation and maintenance (O&M) plan and budgetary arrangement for the proposed District Seedling Farms Operation and maintenance (O&M) plan and budgetary arrangement for the other project components Job descriptions for the project staff and transfer of knowledge to them 												
<p>Activities:</p> <p>Through this sub-programme, District Officers (partly Regional Officers) will make every effort to review and elaborate Action Plan, which is prepared by the JICA study, on the basis of the actual experiences obtained through the initial operation phase.</p> <p>The candidates of trainees will be mainly counter-part personals assigned to the JICA study. The main concept of the training programme is On-the-Job training and Learn-by-Doing.</p> <ul style="list-style-type: none"> Annual plan of operation of the Project Verification of farmers' needs and participatory community planning by PRA Coordination with the government agencies concerned Cost estimate and budgetary arrangement Coordination with international agencies, donors and NGOs 												
<p>Inputs: Donor side</p> <table border="0"> <tr> <td>Institutional Expert (Team Leader)</td> <td>16 M/M</td> </tr> <tr> <td>Participatory Development Specialist</td> <td>16 M/M</td> </tr> <tr> <td>Horticulture Expert</td> <td>16 M/M</td> </tr> <tr> <td>4WD Vehicles</td> <td>2 units</td> </tr> <tr> <td>Computer facilities and other office equipment</td> <td></td> </tr> </table>		Institutional Expert (Team Leader)	16 M/M	Participatory Development Specialist	16 M/M	Horticulture Expert	16 M/M	4WD Vehicles	2 units	Computer facilities and other office equipment		<p>Inputs: Tanzanian side</p> <p>Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc. Translator English-Kiswahili</p>
Institutional Expert (Team Leader)	16 M/M											
Participatory Development Specialist	16 M/M											
Horticulture Expert	16 M/M											
4WD Vehicles	2 units											
Computer facilities and other office equipment												
<p>Time Schedule : 7th to 22nd month (16 months)</p>												
<p>Expected Outputs:</p> <ul style="list-style-type: none"> Smooth operation of the Community-Based Horticultural Development Programme Capacity building for Regional and District Officers for the participatory community development Favorable interrelation and coordination between local governments and other agencies concerned 												

Table 5.4.1 Participatory Development Capacity Building Programme (6/16)

Programme	1. Training for District and Extension Officers									
Sub-Programme	1-6 Training for Management of Participatory Rural Development Projects for Poverty Alleviation									
Target Group	District Officers with selected Regional Officers									
<p>Objectives :</p> <p>Development needs are rapidly growing not only for income generation but also for development of rural infrastructure including drinking water supply, rural and farm roads, schools, dispensary, telecommunication facilities, rural electrification, etc. District Offices are in a position to take responsibilities for plan formulation and implementation for development of those components. Employing the work experiences obtained through the Small Scale Horticultural Development Project, the participatory development approaches will be continued by District Offices. The project ideas arising from the communities will be incorporated and integrated into a rationalized rural development plan such as District Rural Development Plan (DRDP). Then, District Office will promote the DRDP. This sub-programme aims at training of District Officers for overall project management at every stage of the project cycle from plan formulation to project monitoring of DRDP.</p> <p>Some NGOs such as Swissaid, Plan International and CBI are independently deploying their activities in the Region. Unfortunately, District Offices are not well informed about these activities and future plans of those activities. Under current financial constraints at the district level, the supports from NGOs will be essential inputs to meet urgent needs of rural communities for years to come. It is important for District Office to grasp all the information about NGOs' activities in the Region and to facilitate the communities to access NGOs' services when required. This sub-programme aims at capacity building of District Officers to conduct systematic project management by effective use of external resources, i.e. donors and NGOs.</p>										
<p>Activities :</p> <p>The action plan for rural development will be prepared by district officers and communities through the bottom-up approach. The workflow of plan formulation is proposed below.</p> <ul style="list-style-type: none"> Participatory community planning will be undertaken at village level by means of PCM and PRA. Preparation of Action Plan for District Rural Development Plan with priority ranking among development needs in communities and preliminary cost estimate Technical and administrative advise for implementation of priority projects Coordination between government agencies and communities Preparation of draft applications for technical and financial assistance to international agencies, donors and NGOs Preparation of NGOs' activities lists and provision of necessary advises to both NGOs and villages for effective project promotion Execution of Project Benefit Monitoring and Evaluation (PBME) and preparation of PBME reports 										
<p>Inputs: Donor side</p> <table border="0"> <tr> <td>Institutional Expert (Team Leader)</td> <td>16 M/M</td> </tr> <tr> <td>Participatory Development Specialist</td> <td>16 M/M</td> </tr> <tr> <td>4WD Vehicles</td> <td>2 units</td> </tr> <tr> <td>Computer facilities and other office equipment</td> <td></td> </tr> </table>		Institutional Expert (Team Leader)	16 M/M	Participatory Development Specialist	16 M/M	4WD Vehicles	2 units	Computer facilities and other office equipment		<p>Inputs: Tanzanian side</p> <p>Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc. Translator English-Kiswahili</p>
Institutional Expert (Team Leader)	16 M/M									
Participatory Development Specialist	16 M/M									
4WD Vehicles	2 units									
Computer facilities and other office equipment										
<p>Time Schedule : 9th to 24th month (16 months)</p>										
<p>Expected Outputs:</p> <p>Capacity building for Regional and District Officers for the participatory community development Favorable interrelation and coordination between local governments and other agencies concerned</p>										

Table 5.4.1 Participatory Development Capacity Building Programme (7/16)

Programme	1. Training for District and Extension Officers	
Sub-Programme	1-7 Training for Project Benefit Monitoring and Evaluation (PBME) Techniques	
Target Group	District Officers with selected Regional Officers	
Objectives :		
<p>A diversity of agriculture and rural development projects including poverty alleviation projects have been formulated and implemented in Coast Region. However, the project benefits were not monitored and quantified due to lack of post-appraisals manners. In addition, valuable experiences supposed to be accumulated during the project implementation are not utilized to similar projects because few records during the project implementation are kept in District Offices.</p> <p>This sub-programme aims at establishment of the system for Project Benefit Monitoring and Evaluation (PBME) according to the concept of PCM. It is also expected to prove the necessity of PBME to the central government in order to facilitate necessary budgetary arrangement for PBME.</p>		
Activities :		
<p>District Officers with selected Regional Officers will learn the systematic procedure of PBME through the following activities.</p> <p>Preparation of VILLAGE PROFILES by full inputs of Extension Officers</p> <ul style="list-style-type: none"> - Population, households, occupation, land tenure and holding size, village organization, cooperatives and farmers groups, group activities, etc. - Physiography, soils, natural vegetation and land use, natural disasters including floods and drought - Drinking water supply facilities, roads, schools, dispensary and other infrastructure - Agriculture and rural development projects and poverty alleviation projects by fund source <p>Preparation of Annual Agricultural Census by full inputs of Extension Officers</p> <ul style="list-style-type: none"> - Change in land use in village - Crop season, crops, varieties, planting areas, unit yield, production, crop failures by natural disasters - farming practices, farm inputs, agricultural implements - Animal raising and poultry farming - Marketing channels of products, price mechanism, price fluctuation, etc. <p>PBME for On-going Projects</p> <ul style="list-style-type: none"> - PBME on the basis of Agricultural Census - Scheduled interview to benchmark farmers - Problem and needs analysis through PRA - PCM workshop for government staff, extension officers and village leaders <p>Preparation and forwarding of PBME reports</p> <ul style="list-style-type: none"> - Preparation of PBME reports - Distribution of PBME reports to donors and government agencies concerned 		
Inputs: Donor side		Inputs: Tanzanian side
Institutional Expert (Team Leader)	22 M/M	Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc. Translator English-Kiswahili
Horticulture Expert	22 M/M	
Participatory Development Specialist	12 M/M	
4WD Vehicles	2 units	
Computer facilities and other office equipment		
Time Schedule : 3 rd to 24 th month (22 months)		
Expected Outputs:		
<p>Capacity building for Regional and District Officers for PBME</p> <p>Systematic and effective project promotion</p>		

Table 5.4.1 Participatory Development Capacity Building Programme (8/16)

Programme	2. Training for Group Leaders													
Sub-Programme	2-1 Preparation of Training Materials													
Target Group	Group Leaders													
<p>Objectives:</p> <p>The following training materials will be produced under this sub-programme for group leaders.</p> <ul style="list-style-type: none"> Guideline prepared though the JICA study for the Small Scale Horticultural Development Project List of projects and programs in Coast Region promoted by international agencies, donor countries and NGOs Posters and leaflets for promotion of group formation and training of trainers (TOT) Manuals for group activities daily record keeping and accounting procedures 														
<p>Activities:</p> <p>The above-mentioned training materials will be prepared around the following concepts. Some 1,000 copies will be produced for each training material.</p> <p>The Regional Commissioner's Office will take responsibilities for preparation of training materials in association with donors, Ministry of Regional Administration and Local Government (MRALG) and Ministry of Agriculture and Cooperative (MAC).</p> <p>Information accumulated through the JICA study will fully be incorporated into the training materials.</p> <p>Existing training materials prepared by donors and NGOs in the past will fully be utilized in the training programme. The training materials to be prepared under this sub-programme will be more pragmatic and provide more information to direct their tasks and duties of group leaders in community development.</p>														
<p>Inputs: Donor side</p> <table border="0"> <tr> <td>Participatory Development Specialist</td> <td>3 M/M</td> </tr> <tr> <td>Horticulture Expert</td> <td>22 M/M</td> </tr> <tr> <td>Computers and printers</td> <td>2 sets</td> </tr> <tr> <td>Photo-copy machines</td> <td>2 units</td> </tr> <tr> <td>Video camera, video player and</td> <td></td> </tr> <tr> <td>TV set</td> <td>2 units</td> </tr> </table>		Participatory Development Specialist	3 M/M	Horticulture Expert	22 M/M	Computers and printers	2 sets	Photo-copy machines	2 units	Video camera, video player and		TV set	2 units	<p>Inputs: Tanzanian side</p> <p>Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc.</p> <p>Translator English-Kiswahili</p>
Participatory Development Specialist	3 M/M													
Horticulture Expert	22 M/M													
Computers and printers	2 sets													
Photo-copy machines	2 units													
Video camera, video player and														
TV set	2 units													
<p>Time Schedule : 1st to 4th month (4 months)</p>														
<p>Expected Outputs:</p> <ul style="list-style-type: none"> Training materials of a wide range of aspects concerning participatory horticultural development Capacity building for regional and district officers through preparation of training materials 														

Table 5.4.1 Participatory Development Capacity Building Programme (9/16)

Programme	2. Training for Group Leaders											
Sub-Programme	2-2 Seminars and Workshops											
Target Group	Group Leaders											
<p>Objectives:</p> <p>Seminars and workshops will be held for the following subjects.</p> <ul style="list-style-type: none"> Participatory development approach (PCM and PRA) and its concept, methodology & procedure Know-how of appropriate group management Access and application to NGO's assistance <p>Training materials to be prepared in Sub-programme 1-1 will fully be applied.</p>												
<p>Activities :</p> <p>It is proposed that some 100 group leaders will participate in the seminars and the workshops within two (2) years.</p> <p>Lecturers will be selected among the existing superintendent staff in regional and district levels as follows</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Mr. A.H. Mwenkalley (RALDO)</td> <td style="width: 40%;">: Horticulture and future prospect</td> </tr> <tr> <td>Mr. M.B. Twenye (Regional Cooperative Officer)</td> <td>: Cooperative activities</td> </tr> <tr> <td>Mrs. E.S. Mwashha (DEQ, Kibaha)</td> <td>: PRA</td> </tr> </table> <p>Seminars will be held at ward level</p> <p>Lectures will be assigned mainly by Tanzanian side with necessary supports by donors and NGOs</p> <p>Seminars will provide not only lectures but also free-discussion by all attendants</p>			Mr. A.H. Mwenkalley (RALDO)	: Horticulture and future prospect	Mr. M.B. Twenye (Regional Cooperative Officer)	: Cooperative activities	Mrs. E.S. Mwashha (DEQ, Kibaha)	: PRA				
Mr. A.H. Mwenkalley (RALDO)	: Horticulture and future prospect											
Mr. M.B. Twenye (Regional Cooperative Officer)	: Cooperative activities											
Mrs. E.S. Mwashha (DEQ, Kibaha)	: PRA											
<p>Inputs: Donor side</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">Participatory Development Specialist</td> <td style="width: 30%;">3 M/M</td> </tr> <tr> <td>Horticulture Expert</td> <td>3 M/M</td> </tr> <tr> <td>Computer and printer</td> <td>2 units</td> </tr> <tr> <td>4WD Vehicles</td> <td>2 units</td> </tr> <tr> <td>Video players and TV sets (including one mobile unit)</td> <td>6 units</td> </tr> </table>		Participatory Development Specialist	3 M/M	Horticulture Expert	3 M/M	Computer and printer	2 units	4WD Vehicles	2 units	Video players and TV sets (including one mobile unit)	6 units	<p>Inputs: Tanzanian side</p> <p>Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc.</p> <p>Translator English-Kiswahili</p>
Participatory Development Specialist	3 M/M											
Horticulture Expert	3 M/M											
Computer and printer	2 units											
4WD Vehicles	2 units											
Video players and TV sets (including one mobile unit)	6 units											
<p>Time Schedule: 5th to 7th month (3 months)</p>												
<p>Expected Outputs:</p> <ul style="list-style-type: none"> Capacity building in wide range of aspects concerning participatory development Capacity building for group leaders and their candidates Capacity building for regional and district officers 												

Table 5.4.1 Participatory Development Capacity Building Programme (10/16)

Programme	2. Training for Group Leaders	
Sub-Programme	2-3 Skill Training of Horticultural Farming Techniques	
Target Group	Group Leaders	
Objectives:		
<p>As aforementioned at Sub-programme 1-4, this sub-programme aims at selection of standard farming techniques for horticultural crops and intensive training of essential horticultural farming technology to extension officers, i.e. Ward Extension Officer (WEO) and Village Extension Officer (VEO). Around the concept of Training of Trainers (TOT), groups leaders will be trained up under this sub-programme together with WEO and VEO in order to supplement their on-going extension programme.</p>		
Activities :		
<p>The sub-programme will be organized mainly at the District Seedling Farms (DSF), which are proposed under the Project. The DSF will be established to raise and distribute young seedling of fruits trees of qualified varieties and to carry out trial planting with horticultural crops in order to confirm crop (variety) suitability and to select suitable farming techniques. It is also proposed to keep a close coordination with Sokoine University of Agriculture (SUA, Department of Crop Science & Production) to obtain new varieties of horticultural crops and rationalize the research activities. Trial planting at the DSF is supplemented by simple cropping tests at village level. On the basis of the research results to be thus obtained, a standard farming practice for each vegetable will be set up and transferred to local farmers through the existing extension channel.</p> <p>Apart from farming techniques, know-how of financial management will also be transferred to farmers by extension officers and key farmers (group leaders). Main activities proposed under this sub-programme include:</p> <ul style="list-style-type: none"> Technical training through actual farming at the DSF Seminars on environmental conservation practices, e.g. appropriate usage of pesticides and chemical fertilizers, soil and moisture conservation Educational tours to Sokoine University of Agriculture, leading horticultural regions, e.g. Tanga, Iringa, Moshi, etc. and public markets in Dar es Salaam, and so on Educational tours to agro-processing plants, vegetable sorting facilities and cold storage in Dar es Salaam for export-oriented crops Lectures on farm management for cropping schedule, farm budget analysis, etc. 		
Inputs: Donor side		Inputs: Tanzanian side
Horticulture Expert	12 M/M	Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc. Translator English-Kiswahili
4WD Vehicles	2 units	
Crop research equipment, water quality analysis kit, soil survey equipment, etc. 1 unit for each		
Time Schedule: 6 th to 14 th month (9 months)		
Expected Outputs:		
<p>Improvement of farming techniques among key farmers (group leaders) Close relationship between extension officers and key farmers (group leaders) Cost saving in the on-going extension activities by actual involvement of group leaders to supplement WEO and VEO</p>		

Table 5.4.1 Participatory Development Capacity Building Programme (11/16)

Programme	2. Training for Group Leaders	
Sub-Programme	2-4 Leadership Training in Group Leaders' Committee	
Target Group	Group Leaders	
Objectives:		
<p>The group leaders are expected to participate in the joint meeting at village level, which will be developed to Group Leaders' Committee. It is expected that the Committee will be a trustee of any micro-credits in future. They will be provided the overall and systematic training through the activities in the Committee placing more emphases on On-the-Job Training (OJT).</p>		
Activities:		
<p>The group leaders will exchange their opinions about constraints encountered and their own experiences how to solve the problems each other in the Committee. Through these practices, each leader will enhance their knowledge on appropriate group management. District Officers and Extension Workers will occasionally attend the meeting and provide advises when required. The main aspects concerned are;</p> <ul style="list-style-type: none"> Establishment of Group Leaders' Committee and registration to District Offices Concepts and procedures of participatory community development Exchange of opinions on problems and needs in group activities Gender imbalance encountered Group operation with democracy and high transparency Coordination of the Input Credit scheme Price information of agricultural products and marketing channels Operation and maintenance (O&M) of community's assets, e.g. multi-purpose sheds, sprayers, etc. Group farm operation and marketing especially for fruit farmers Daily record keeping and accounting reports Presentation of group activities in the Committee Village functions such as agricultural show, movie show, football games, etc. 		
Inputs: Donor side		Inputs: Tanzanian side
Participatory Development Specialist	22 M/M	Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc. Translator English-Kiswahili
Horticulture Expert	22 M/M	
4WD Vehicles	2 units	
Video players and TV sets	6 units	
(including one mobile unit)		
Time Schedule: 3 rd to 24 th month (22 months)		
Expected Outputs:		
<ul style="list-style-type: none"> Skills in horticultural farming among group leaders Democratic group management Promotion of participatory community development 		

Table 5.4.1 Participatory Development Capacity Building Programme (12/16)

Programme	2. Training for Group Leaders									
Sub-Programme	2-5 Training for Group Operation through Actual Activities with Members									
Target Group	Group Leaders									
<p>Objectives :</p> <p>The sustainability of groups is dependent highly upon necessity of group formation. For instance, water users associations are essential for proper operation and maintenance (O&M) of water supply facilities, which are the lifelines of all the members of a association. Disorder to water supply facilities is crucial. Therefore, all the group members organize a group to operate and maintain their facilities. On the other hand, the groups organized for credit procurement and group marketing are less sustainable due to their lower necessity. They are more susceptible to minor troubles among members. However, the successful group activities for credit operation can be seen in the NGOs activities, e.g. Umbrella groups of Swissaid. With such a reference, the group operation will be reinforced by all the members through day-to-day activities.</p> <p>In Coast Region, the conditions of successful groups are generally groups organized for single objective or target, family members are excluded from same group, strong leadership, democratic and transparent management and so on. This sub-programme will focus on strengthening group operation through actual activites.</p>										
<p>Activities :</p> <p>At the initial stages of group activities, it may not be appropriate for leaders to take a wide range of tasks and responsibilities due to their limited capacity. Leaders will concentrate on minimum duties for group operation necessary for the project participation. They include;</p> <ul style="list-style-type: none"> Discussion and agreement of group operation rules among members Coordination of the Input Credit, i.e. application and repayment Setting up and collection of membership fee 										
<p>Inputs: Donor side</p> <table border="0"> <tr> <td>Participatory Development Specialist</td> <td>22 M/M</td> </tr> <tr> <td>Horticulture Expert</td> <td>22 M/M</td> </tr> <tr> <td>4WD Vehicles</td> <td>2 units</td> </tr> <tr> <td>Video players and TV sets (including one mobile unit)</td> <td>6 units</td> </tr> </table>		Participatory Development Specialist	22 M/M	Horticulture Expert	22 M/M	4WD Vehicles	2 units	Video players and TV sets (including one mobile unit)	6 units	<p>Inputs: Tanzanian side</p> <p>Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc. Translator English-Kiswahili</p>
Participatory Development Specialist	22 M/M									
Horticulture Expert	22 M/M									
4WD Vehicles	2 units									
Video players and TV sets (including one mobile unit)	6 units									
<p>Time Schedule: 3rd to 24th month (22 months)</p>										
<p>Expected Outputs:</p> <ul style="list-style-type: none"> Democratic group management Promotion of participatory community development 										

Table 5.4.1 Participatory Development Capacity Building Programme (13/16)

Programme	3. Community Awareness Creation	
Sub-Programme	3-1 Empowerment of Poverty Group including Women and Youth	
Target Group	Poverty group including women and youth	
<p>Objectives:</p> <p>In the rural societies of Coast Region, problems and needs are discussed at the Village Assembly held every third month. The Village Assembly is the highest body for decision making of village. According to the decisions thus made, if required, official requests for government assistance are forwarded to District Office. This procedure are well known among the rural societies according to the information obtained through the farm interview survey and PRA by the JICA study. However, in most cases, the Village Assembly is not regularly held and attendants at the Assembly are limited. This implies that opinions of poverty groups including women and youth are hardly reflected to the Village Assembly resulting in low accessibility to the public services for them.</p> <p>Community-Based Horticultural Development Programme aims firstly at poverty alleviation and focuses on more participation of women and youth to economic activities by means of horticulture farming and marketing. In order to empower this group of rural society, Community Awareness Creation will be promoted under this sub-programme. The community awareness creation aims at advocacy for quality of life among community.</p>		
<p>Activities:</p> <p>District Office will promote the following activities by obtaining the supports by donors and NGOs.</p> <ul style="list-style-type: none"> Preparation of posters and leaflets for promotion of group formation and participation in group activities Empowerment of poverty groups through PRA Education focusing on concepts and administrative procedures of participatory development to transfer the knowledge how to solve problems Promotion of WID 		
<p>Inputs: Donor side</p> <p>Participatory Development Specialist 22 M/M</p> <p>PCM/PRA specialists from NGOs and local consultants 12 M/M</p> <p>4WD Vehicles 2 units</p> <p>Video players and TV sets (including one mobile unit) 6 units</p>		<p>Inputs: Tanzanian side</p> <p>Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc.</p> <p>Translator English-Kiswahili</p>
<p>Time Schedule: 3rd to 24th month (22 months)</p>		
<p>Expected Outputs:</p> <ul style="list-style-type: none"> More participation of poverty groups Democratic group operation Promotion of participatory community development 		

Table 5.4.1 Participatory Development Capacity Building Programme (14/16)

Programme	3. Community Awareness Creation									
Sub-Programme	3-2 Group Formation and Establishment of Group Operation Rules									
Target Group	Farmers									
<p>Objectives:</p> <p>Group formation will be promoted for Community-Based Horticulture Development. Recreation and other functions inviting more women will be combined in this sub-programme for conservative societies.</p> <p>Group operation rules, which are agreed by all the members, are fundamental for successful and sustainable group activities. Under the chairmanship of a group leader, members will discuss and agree with their own rules. District Officers and Extension Officers will occasionally participate in the meeting to provide necessary advises by referring to case study of successful groups. In the meeting, individual members will recognize a right and a responsibility to a group under the group operation rules. It is important to keep records in the meetings.</p>										
<p>Activities:</p> <p>PRA will be fully applied for promotion of group formation. Women and youth, which are not aware of advantages of group activities, will be accessed by all possible measures and opportunities. For instance, several functions such as video show for introduction of successful women groups, distribution of free vegetable seeds, health education at the occasion of periodical medical check, cooking demonstration, etc. will be organized under this sub-programme.</p> <p>After groups are formed, the following procedures will be introduced.</p> <ul style="list-style-type: none"> Selection of a group leader Establishment of group operation rules Joint meeting with advanced groups to know the Project Application to participation in the Project 										
<p>Inputs: Donor side</p> <table border="0"> <tr> <td>Participatory Development Specialist</td> <td>22 M/M</td> </tr> <tr> <td>PCM/PRA specialists from NGOs and local consultants</td> <td>12 M/M</td> </tr> <tr> <td>4WD Vehicles</td> <td>2 units</td> </tr> <tr> <td>Video players and TV sets (including one mobile unit)</td> <td>6 units</td> </tr> </table>		Participatory Development Specialist	22 M/M	PCM/PRA specialists from NGOs and local consultants	12 M/M	4WD Vehicles	2 units	Video players and TV sets (including one mobile unit)	6 units	<p>Inputs: Tanzanian side</p> <p>Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc.</p> <p>Translator English-Kiswahili</p>
Participatory Development Specialist	22 M/M									
PCM/PRA specialists from NGOs and local consultants	12 M/M									
4WD Vehicles	2 units									
Video players and TV sets (including one mobile unit)	6 units									
<p>Time Schedule: 3rd to 24th month (22 months)</p>										
<p>Expected Outputs:</p> <ul style="list-style-type: none"> More participation of poverty groups Democratic group operation Promotion of participatory community development 										

Table 5.4.1 Participatory Development Capacity Building Programme (15/16)

Programme	3. Community Awareness Creation	
Sub-Programme	3-3 Participation in Small Scale Horticultural Development Project	
Target Group	Group members	
<p>Objectives :</p> <p>In Coast Region, peasant farmers produce mainly food crops such as maize and paddy for their home consumption supplemented by cassava both for home consumption and income sources at subsistence level. Apart from these staple crops, horticultural crops are planted as cash crops to the limited extent. Currently, local production nearly meets demand in local market except at peak demand periods during the rainy seasons. Therefore, it is recommended to expand the horticultural production in the Region carefully taking into account the market and price conditions of local market. Otherwise, farmers will be mis-led to less sustainable crop production taking a high risk.</p> <p>In terms of horticultural production, farmers in Coast Region are categorized into three (3) cropping zones, namely High-input vegetable zone, Low-input vegetable zone and Fruit crop zone. The Project is formulated to support three cropping zones. Under Community Based Horticultural Development Programme, Input Credit is the main component to support vegetable production by the farmers. Under District Seedling Farm Project, fruit tree seedling will be produced and distributed to the farmers.</p> <p>This sub-programme aims at promotion of the participation of farmers mentioned above.</p>		
<p>Activities :</p> <p>District Office will conduct PRA. Extension Officers and Group Leaders will provide the information to direct the farmers to the Project.</p> <p>Guidance to the farmers according to the guidelines prepared under the JICA study</p> <p>Appropriate farming techniques and Input Credit</p> <p>District Seedling Farms and seedling distribution system at village level</p> <p>Operation and maintenance of community facilities and equipment such as multi-purpose shed, sprayers and so on.</p> <p>At same time, it is expected that farmers will mutually recognise necessity for the following activities.</p> <p>Participation in the regular meeting for discussing problems and needs among the group</p> <p>Share of responsibilities and mutual aid</p> <p>Group marketing</p> <p>Membership fee and loan repayment</p>		
<p>Inputs: Donor side</p> <p>Participatory Development Specialist 22 M/M</p> <p>Horticulture Expert 22 M/M</p> <p>4WD Vehicles 2 units</p> <p>Video players and TV sets 6 units</p> <p>(including one mobile unit)</p>		<p>Inputs: Tanzanian side</p> <p>Superintendent staff of both regional and district levels, e.g. RALDO, RPO, RCO, DALDO, DEO, etc.</p> <p>Translator English-Kiswahili</p>
<p>Time Schedule: 3rd to 24th month (22 months)</p>		
<p>Expected Outputs:</p> <p>Promotion of Small Scale Horticultural Development Project</p> <p>Promotion of participatory community development</p>		

Table 5.4.1 Participatory Development Capacity Building Programme (16/16)

Programme	3. Community Awareness Creation	
Sub-Programme	3-4 Promotion of Group Activities by means of Community Facilities	
Target Group	Villagers	
<p>Objectives:</p> <p>For all agricultural activities in a village from production to marketing, grouping benefits villagers in some way by holding stronger bargaining power. Almost all village farmers understand how effective grouping is, and it seems that necessary groups have been already formed. However, it is also true that unless there are no more incentive, to promote further grouping is difficult. This sub-programme investigates effect of further grouping by providing facilities such as rice polisher and multipurpose shed.</p> <p>A meeting place is the most important facility for facilitating capacity building in a village. Most of the villages studied substitute a school and an office of CCM, the biggest political party in the county for it. If neither of them, the place under a tree becomes a kind of assembly. Therefore, this shed shall be used for a meeting place at first instance. Moreover, it should become a useful facility for both conducting the capacity building programme and managing accounting works of input-credit.</p>		
<p>Activities:</p> <p>Multipurpose shed: This study sees whether the shed should be used only for a meeting place and simultaneously examines whether the shed is functioned for other purposes such as a collecting place of products, a regularly scheduled market and so forth. Besides that, the study tries to show other ways of shed use with reference to the characteristics of each village.</p> <p>Rice polisher: Grouping is promoted for operating a rice polisher. Then its operation is studied. It is also an important component to examine how much women's working time is lessened by the facilities.</p>		
<p>Inputs: Donor side</p> <p>Rural sociologist Civil engineer 1 M/M Construction of multipurpose shed Installation of rice polisher</p>		<p>Inputs: Tanzanian side</p> <p>DALDO Extension officers</p>
<p>Time Schedule:</p> <p>The construction starts one month after the verification study begins. Monitoring is continued through the programme period.</p>		
<p>Expected Outputs:</p> <ol style="list-style-type: none"> 1. Promotion of grouping 2. Reduction of women's working time 3. Encouragement of lively communication in a village 		

Table 5.4.2 Participatory Development Capacity Building Programme (PDM)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal Farm income of small farmers is increased.			
Project Purpose DOs, WEOs & VEOs play assisting and advisory roles in participatory development by farmers.			Farmers participate in the proposed Community Based Horticultural Development Project.
Outputs 1. DOs, WEOs & VEOs identify development needs of farmers and report the identified needs to District Offices with possible solutions. 2. DOs, WEOs & VEOs provide administrative and technical assistance to farmers in participatory project planning and implementation. 3. DOs, WEOs & VEOs carry out the project monitoring.	Administrative and technical capabilities of WEOs & VEOs are improved. WEOs & VEOs prepare work schedule and record their activities. DOs are reported by WEOs & VEOs regularly. VEOs attend village assembly and other meetings of village leaders.	Problem tree, Objective tree, PDM, Action plan Work schedule and daily work records (diary) of DOs, WEOs & VEOs. Meeting record and attendance rate of Bi-monthly Training Session of WEOs & VEOs. Performance of T&V system Records of village assembly and meetings Interview to Village Council	Logic supports to DOs, WEOs & VEOs are provided.
Activities	Inputs		
1-1 Prepare text and materials (guidelines) for DOs, WEOs & VEOs. 1-2 Provide DOs, WEOs & VEOs with guidance in the Government agricultural & rural development policies and in methodology of participatory development. 1-3 Train DOs, WEOs & VEOs to PCM. 2-1 DOs, WEOs & VEOs prepare the action plan for participatory development. 2-2 Prepare posters and leaflets for farmers' awareness creation and group activities. 2-3 WEOs & VEOs encourage farmers' identification of development needs. 3-1 Provide DOs, WEOs & VEOs with the training in PBME.	Donor Personnel 1) Project leader (Institutional expert) 2) Participatory development expert Equipment 1) Transportation facilities 2) Photo-copy machine 3) Computer & printer 4) Mobile audio-visual set Facilities 1) Multi-purpose shed in village for training, workshop and meeting 2) Office space attached to 1)	Tanzania Personnel 1) Project manager 2) Coordinator Local Cost Project implementation and management cost.	NEAP II is operated as scheduled. Farmers are willing to participate in the group activities. Preconditions The Government does not change the current extension policy. Functions of District Offices are not changed.

Remark : DO (District Officer), WEO (Ward Extension Officer), VEO (Village Extension Officer)

Table 5.5.1 District Seedling Farm Programme (PDM)

Project Name: District Seedling Farm Programme in Coast Region Duration: 2000 - 2002 (2 years)
Project Area: Coast Region Target Group: Small farmers Date: January 2000

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal Farm income of small farmers is increased.	Annual income from tree/fruit crops is increased to 10 % within 5 years.	Farm household survey.	
Project Purpose Improved seedlings of fruit/tree crops replace old trees.	100,000 improved seedlings are planted in the farmland every year.	Marketing record, Working record of VEOs	
Outputs 1. High quality seedlings of fruit/tree crops are produced. 2. High quality seedlings of fruit/tree crops are distributed at the adequate rate to farmers. 3. Farmers replace old trees by new ones of improved varieties. 4. Farmers grow seedlings with advanced techniques. 5. Farmers cultivate suitable vegetables with advanced techniques.	Each seedling farm produces and sells 20,000 improved seedlings per year.	Farm operation record, Marketing record	There are no obstacles to distribute seedlings.
Activities 1-1 Every district establishes a seedling farm. 1-2 Seedling farms produce improved seedlings using advanced techniques. 2 Seedling farms sell improved seedlings to farmers. 3 Farmers plant the seedlings on their own farmland properly. 4 Demonstrate advanced techniques to farmers for making seedlings. 5 Demonstrate new varieties/vegetables and advanced techniques of vegetable cultivation.	Inputs <u>Donor</u> Personnel 1) Project leader 24 M/M 2) Horticulture expert 24 M/M Equipment 1) Computer 2 units 2) Copy machine 1 unit 3) Fax machine 1 unit 4) Tractor 5 units 5) Portable pump 5 units 6) Knapsack-type sprayer 5 units 7) Weighing scale 5 units 8) Soil test kit 5 units 9) Water test kit 5 units Facilities (5 sets) 1) Office 3 rooms 2) Warehouse 1 unit 3) Dormitory 3 rooms 4) Net house 1 unit	<u>Tanzania</u> Personnel (5 sets) 1) Project manager 24 M/M 2) Horticulturist 24 M/M 3) Accountant 12 M/M 4) Workers (5) 120 M/M Equipment (5 sets) 1) Office equipment 2) Farming tools Facilities (5 sets) 1) Farmland ± 4 ha 2) Shallow well 1 unit	District offices do proper arrangement of staffs. The income from selling the seedlings is reinvested to produce seedlings. Local staff members learn advanced techniques of seedling management from the expert of donor country. <u>Preconditions</u> District offices are willing to operate the seedling farms. Suitable farmlands are available.

Table 5.6.1 Rural Transport Improvement Programme (PDM)

Project Name: Rural Transport Improvement Programme Duration: 2000 - 2002 (2 years)

Project Area: Coast Region Target Group: Small farmers Date: January 2000

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal Farm income of small farmers is increased.	Annual income of farmers in Coast Region is increased at 10 % within 5 years.	Farm household survey.	Other circumstances in horticultural development are improved.
Project Purpose Improvement of transportation through O & M of rural roads and introduction of new transportation means.	Traffic in rural area is increased at 50 % within 3 years.	Future traffic survey in specified rural areas.	Major rehabilitation and new construction of roads have to be carried out as scheduled by the Government.
Outputs 1. Transportation in rural area becomes convenient through introduction of new means. 2. Through introduction of the new means, villagers hold a solid sense of importance of road maintenance. 3. Villagers' organization holds main role for road maintenance. 4. Necessary equipment for road maintenance can be appropriated smoothly.	Cart/trolley are used in every village in Coast Region within 5 years. Participation of villagers for road maintenance is observed in almost all villages in Coast Region by 2005.	Future traffic survey in specified rural areas.	There are no obstacles in villagers' use of the new transportation means, especially repair and maintenance. Necessary numbers of the Maintenance Units with equipment available have to be established by the Government.
Activities 1-1 Carry out a verification study for the introduction of new transportation means such as cart/ trolley. 1-2 Select and introduce pilot areas for the verification study with the new means of transportation. 2 Set up new formulation of villagers' participation for road improvement. 3 Build capability of villagers' organization on adequate use of necessary equipment for road maintenance.	Inputs Donor Personnel 1) Specialist 6 M/M 2) Assistant 6 M/M Equipment 1) Cart/ trolley 30 nos. 2) Attachments L.S. Personnel 1) Socio-specialist 6 M/M 2) Farmer organizer 6 M/M 3) Road Specialist 6 M/M 4) Equipment 6 M/M 5) Economist 3 M/M	Tanzania Personnel 1) Counterpart 6 M/M Equipment 1) Office L.S. 2) Stock yard L.S. Personnel 1) Counterpart (1) 3 M/M 2) Counterpart (2) 3 M/M 3) Counterpart (3) 3 M/M Equipment 1) Office L.S. 2) Office equipment L.S.	District offices do proper arrangement of staff. Baseline of villagers' participation for road maintenance is investigated. Preconditions Transportation in rural area is under ill conditions requiring urgent improvement. Horticulture development has been enhanced in the Project area.

Table 5.7.1 Main Environmental Impacts

Impacts on soil	Impacts on water sources	Impacts on vegetation	Impacts on health	Socio-economic Impacts
<p>A controlled and improved watering system using pump and better distribution methods as planned in this project would not cause a brutal and irreversible modification of the soils. However, more regular and more intensive watering can locally create, namely on salty soils, drainage and salinization problems. While on well-drained soils more intensive cropping systems can deplete them of their nutrients. This fertility loss, when not compensated by a supply of nutrients, can in the long run create an unfavorable evolution of soil structure due namely to the low organic matter content.</p>	<p>Fungicides and pesticides are very important in protecting plants against diseases and insect pests. Manure and fertilizers are even more important in providing to the plants complementary nutrient sources. The application of these inputs is not without inconveniences and will induce some impacts on the environment.</p> <p>Though chemical fertilizer, fungicide and pesticide are utilized in very small amounts as most vegetable growing farmers cannot afford them, their application might increase with this project as farmers will be more organized and will be provided with more means to enable them to purchase these inputs.</p> <p>Presently farmers use manure as organic fertilizer and cut cost on fungicide and pesticide by producing vegetable on the dry season to minimize diseases and pests. For tree crops such as cashew nut, on the other hand, fungicide such as sulfur powder is used intensively to boost yields.</p> <p>Several agro-chemicals are recommended for vegetables treatment in Tanzania. Some of these products such as blue copper and sulphur powder are quite toxic and can be greatly harmful when used unwisely.</p>	<p>Construction works, in case small clearing and tilling are carried out can impact on the vegetal cover and biodiversity through the exploitation of pastureland and natural forests bordering the project sites. Afforestation and tree species diversification around vegetable gardens should be encouraged and generalized as one conservation measure.</p>	<p>A 1998 epidemiological study carried out by the Regional Medical Office in Kibaha shows an increase of malaria, which led the list in all districts in the 10 motives for consultation, admission to hospital and death. Diarrhoeic related illnesses, though in the increase compared to 1996 and 1997, accounted only for 7% of the motives for consultation, behind anemia, respiratory related illnesses including pneumonia, and 5% of the motives for death behind TB, anemia, and respiratory related illnesses. Intestinal bilharzia is low in the list and accounted for only 3% of the motives for consultation among the 10 major diseases. Respiratory related illnesses are expected to rise in the future following the increase of agrochemicals, namely pesticide and fungicide. Malaria remains alarming due to its exponential increase. Cholera occurs annually in the area and could be endemic if appropriate hygienic measures are not taken regarding drinking water, toilet, etc.</p>	<p>On an economical viewpoint, there will be certain positive direct impacts such as: 1) the increase in the net income of the growers; 2) the improvement of the nutritional condition of the populations due to the increase availability of vegetable and cash to get other food crops; 3) the increase availability of fresh vegetables due to the intensive gardening of women groups.</p> <p>The negative economic effects come from: 1) the risk for the growers to contract debts when there is a decrease in production due to technical or organizational problems or due to a consecutive lack of water related to a prolonged and generalized drought; 2) the risk to contract debts following a decrease in price due to market fluctuations.</p> <p>The socio-economic positive effects will reside in the setting of a dynamic organizational structure constituted by the farmers or growers groups. This will induce a sense of solidarity among members of a group.</p> <p>The negative effects come from: 1) the necessity to require the support of external institutions or suppliers for the promotion of horticultural crops creating a relationship of dependence between farmers and suppliers who are more informed of market mechanisms; 2) the individualization of the debt and problems related to its payment creating the risk that persons without link with the grower may acquire rights to his/her detriment.</p> <p>Overall, there will be positive and negative effects. Among these effects some will be durable and some can be reversible. The measures to take will consist in consolidating positive durable effects and correcting negative ones. The corrective measures for environmental conservation will then be to put emphasis on the components affected by the development.</p>

Table 6.1.1 Records of Promising Significant Factors for Development Potential

Name of District	Name of Division	Area (km ²)	Population	Population Density (/km ²)	School Enrolments (%)	Number of Extension Staff per 100km ²	Road Density (km/km ²)	Surface Water Availability*	Groundwater Availability**	Average rainfall (mm/year)	Soil Suitability ***	Land Angulations ****	Distance to Par Es Salaam (km)	Road Length (1)***** (km)	Road Length (2)***** (km)	Farmers Group Activity	Horticulture Area (ha)	Areal Percentage of Horticulture (%)	
BAGAMBOYO	KWARUHOMBO	1,030	22,572	21.91	12.17	0.29	0.110	5.0	2.8	990	4.0	5.0	90.0	112.0	122.0	B	49	0.0476	
	MIONO	4,097	26,790	6.54	15.49	0.05	0.044	3.0	2.5	940	4.0	4.5	135.0	182.0	187.0	B	63	0.0154	
	MISATA	755	22,790	30.19	12.35	0.53	0.189	2.0	1.5	990	4.5	4.0	78.0	147.0	147.0	B	40	0.0530	
	MISOGA	2,541	79,428	31.26	12.70	0.16	0.085	3.0	2.1	950	4.5	4.0	97.0	130.0	130.0	A	80	0.0315	
	MWAMBABO	641	26,778	41.78	15.02	0.78	0.406	5.0	3.8	1,100	5.0	5.0	70.0	72.0	72.0	B	35	0.0546	
	YOMBO	778	24,928	32.04	17.74	1.29	0.064	2.0	3.5	1,050	5.0	5.0	43.0	70.0	70.0	B	44	0.0566	
	Sub-Total (or Mean)	9,842	203,286	20.65	13.89	0.28	0.098	3.3	2.7	1,003	4.5	4.6	88.5	118.8	121.3		311	0.0316	
	MAFIA	KUSINI	276	21,460	77.75	-	0.72	0.403	2.0	4.0	1,850	-	-	130.0	-	-	-	-	-
		KASKAZINI	242	23,982	99.10	-	0.00	0.403	2.0	4.0	1,830	-	-	135.0	-	-	-	-	-
		Sub-Total (or Mean)	518	45,442	87.73	-	0.39	0.403	2.9	3.4	1,297	-	-	93.4	-	-	-	-	-
MKURANGA	KISIJU	503	45,554	90.56	12.24	0.80	0.237	2.0	3.6	1,200	4.0	4.0	63.0	91.0	102.5	B	55	0.1093	
	MKAMBA	990	45,314	45.77	14.06	0.30	0.129	2.0	3.2	1,020	5.0	4.0	68.0	110.0	122.5	B	47	0.0475	
	MKURANGA	805	34,755	43.17	20.89	0.87	0.334	2.0	3.4	1,150	4.0	4.0	35.0	45.0	45.0	B	128	0.1590	
	SHUNGUBWENI	134	16,277	121.47	7.58	2.24	0.597	2.0	4.0	1,250	5.0	5.0	50.0	68.0	77.5	B	34	0.2537	
	Sub-Total (or Mean)	2,432	141,900	58.35	14.41	0.70	0.245	2.1	3.6	1,291	4.5	4.3	74.1	78.5	86.9		264	0.1086	
	KISARAWA	CHOLESAMVULA	1,534	20,442	13.33	10.99	0.13	0.065	2.0	3.3	880	5.0	4.5	105.0	126.0	156.5	B	5	0.0033
		SUNGWI	937	39,571	42.23	16.67	0.75	0.187	2.0	3.0	990	4.5	3.0	26.0	42.0	42.0	B	5	0.0053
		MANEROMANGO	837	14,628	17.48	29.64	0.72	0.136	2.0	3.1	930	4.5	4.0	76.0	88.0	99.5	B	5	0.0060
		MZENGA	1,156	19,129	16.55	16.79	0.26	0.198	4.0	3.4	940	6.0	5.0	77.0	78.0	87.0	B	55	0.0476
		Sub-Total (or Mean)	4,464	93,770	21.01	17.48	0.40	0.138	2.4	3.4	1,047	4.9	4.3	68.0	80.1	91.6		70	0.0157
KIBAHA	KIBAHA	546	56,714	103.87	20.31	2.56	0.450	2.0	3.0	985	4.5	3.0	35.0	40.0	40.0	A	68	0.1245	
		MLANDIZI	869	37,132	42.73	6.55	1.15	0.115	2.2	3.3	980	6.0	4.0	52.0	60.0	62.5	B	95	0.1093
		RUVU	397	19,736	49.71	6.87	1.26	0.287	4.0	2.8	950	5.0	5.0	79.0	93.0	100.8	C	131	0.3300
		Sub-Total (or Mean)	1,812	113,582	62.68	13.47	1.60	0.254	2.8	3.2	972	5.2	4.2	64.5	73.2	80.2		294	0.1623
	RUFUJI	HWIRIRI	575	21,991	38.25	10.19	0.87	0.068	4.0	4.2	1,060	5.5	5.5	130.0	172.0	172.0	C	39	0.0678
		KIBITI	1,811	58,630	32.37	15.23	0.50	0.173	2.0	3.5	1,080	4.5	4.0	98.0	135.0	135.0	B	125	0.0690
		KIKALE	1,151	21,567	18.74	10.67	0.17	0.071	5.0	4.5	1,340	5.0	5.5	117.0	170.0	181.3	C	23	0.0200
		MKONGO	6,776	43,818	6.47	14.64	0.06	0.041	5.0	3.0	840	4.5	5.0	158.0	235.0	275.0	C	45	0.0066
		MWERA	512	21,310	41.62	6.79	0.00	0.037	5.0	4.5	1,470	5.0	6.0	137.0	249.0	266.5	C	5	0.0098
		MHORO	2,514	16,139	6.42	14.00	0.04	0.060	3.0	3.0	1,100	4.5	5.0	159.0	252.0	266.5	C	30	0.0119
	Sub-Total (or Mean)	13,339	183,455	13.75	12.86	0.16	0.066	4.0	3.8	1,148	4.8	5.2	133.2	202.2	216.0		267	0.0200	
	Total (or Mean)	32,407	781,435	24.11	12.019	0.35	0.201	2.91	3.33	1,126,490	3.98	3.75	86.4	92.1	99.3		1,206	0.0372	

* 2: area more than 30% does big
3: area less than 30% does big
4: area less than 15% does big
5: some circumstances exist within.
1: few transhumants exist within.

** 5: Very much available
4: Much available
3: Fairly available
2: Poorly available
1: Not available

*** 7: Very much suitable
6: Suitable
5: Fairly suitable
4: Fairly suitable
3: Fairly suitable
2: Fairly suitable
1: Not suitable at all

**** 7: Very much flat
6: Fairly flat
5: Fairly flat
4: Fairly flat
3: Fairly flat
2: Fairly flat
1: Not suitable at all

***** Distance passing actual existing road: A: Active road: B: Fair road: C: Inactive road: 25 road: 50% road: 100% road: 100% road: 100%

Table 6.3.1 Selection of Priority Sites among Interview Surveved Villages

Development Type	High Potential Divisions	Interview Surveved Villages*	Population	No. of FarmHHs	Vegetable Growing HHs	Ave. Income from Horticulture Crops**	Share of Income from Horticulture	Remarks
A	Kibaha	Mwandapole	6,113	1,000	200	201,250	0.785	This is the most advanced village in horticulture in the Study area.
		Viziwaziwa	1,635	200	169	72,500	0.763	This is a selected site because the village has a room to be developed more.
		Mwanabito	1,321	250	180	78,750	0.677	This is a selected site because the village is a pioneer of development type B.
B	Ruvu	Minazimikinda	2,250	-	50	71,250	0.891	
		Mafizi	1,069	-	-	50,000	0.702	
		Interview Surveved Villages*	Population	No. of FarmHHs	Vegetable Growing HHs	Ave. Income from Tree Crops	Share of Income from Tree Crops	Remarks
C	Sungubweni	-	-	-	-	-	-	No villages within the division were interviewed.
		Mkuranga	2,052	630	320	50,000	0.374	This is a selected site because the village is a pioneer of development type C.
	Mkuranga	Vikindu	4,000	650	60	97,500	0.500	
		Vianzi	2,440	618	50	11,250	0.107	
		Kimanzichana	2,250	-	50	25,000	0.274	
	Sungwi	Kisarawe	6,292	1,266	412	93,750	0.426	This is a selected site because the village is a pioneer of development type C.
		Mfuru	1,770	170	98	27,500	0.407	

*: Villages of which names written by bold face are the selected priority sites.

***: Average Income from Horticulture Crops was calculated as a household income gained from horticulture of all 20 interviewees for the interview surveyed village.