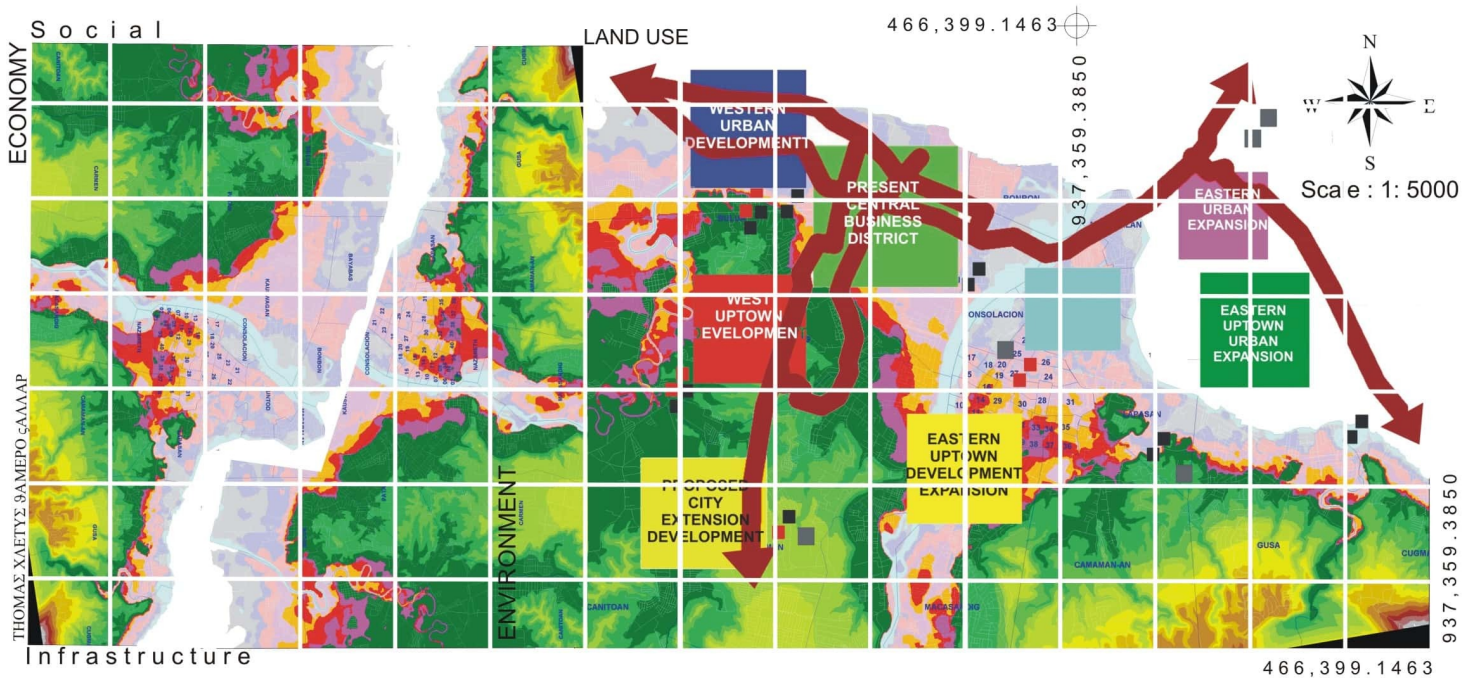




SECTORAL STUDIES

C a g a y a n d e O r o C i t y



2013 to 2022
CLUP
Volume 3

TABLE OF CONTENTS

Chapter 1	Demography	1
Chapter 2	Physical Environment	17
Chapter 3	Social Sector	36
	Housing	37
	Health	50
	Education	71
	Protective Services	86
	Sports and Recreation	96
	Social Welfare	100
	Integrated Social Sector Policy Options	108
	Assessing Single Actions for DRR – Social Sector	118
	Integrated Sectoral Priority Programs and Projects	124
Chapter 4	Economic Sector	126
	Industry	127
	Commerce and Trade	136
	Agriculture, Fishery, Forestry and Mining	146
	Tourism	166
	Integrated Economic Sector Policy Options	189
	Assessing Single Actions for DRR – Economic Sector	193
	Integrated Sectoral Priority Programs and Projects	204
Chapter 5	Infrastructure and Utilities Sector	206
	Transportation	207
	Power	224
	Water	227
	Information and Communications Technology	235
	Waste Management	243
	Integrated Infrastructure Sector Policy Options	248
	Assessing Single Actions for DRR – Infra Sector	251
	Integrated Sectoral Priority Programs and Projects	261
Annexes		263
	Social Sector Annexes	264
	Economic Sector Annexes	316
	Infrastructure Sector Annexes	350

LIST OF TABLES

Tables	Title	Pages
Chapter 1 Demography		
1.1	Household Population by Age-Group and Sex, 2010	2
1.2	Population Composition by School-Age, Dependent-Age, Age-Group and Sex, 2010	6
1.3	Household Population by Urban and Rural Barangays (Average Household Size of 4.4), 2010	6
1.4	Population Density, Gross Density and Built-Up Density, 2010	8
1.5	Historical Growth of Population	10
1.6	Crude Birth Rate (CBR) and Crude Death Rate (CDR) for the last five years, 2006-2010	11
1.7	Literacy Rate of Population 10 Years Old and Over, by Sex, 2010	11
1.8	Labor Force Population by Age-Group and Sex, 2010	12
1.9	Overseas Workers as of 2010 by Age-Group and Sex	12
1.10	Household Population 5 years old and over by Highest Educational Attainment, 2010	12
1.11	Projected Population & Household, 2010-2022	13
1.12	Urbanization Level for the past 20 years	13
1.13	Population Projection by Barangay	14
1.14	Projected School-Age Population, Labor Force and Dependent Population	16
Chapter 2 Physical Environment		
2.1	Land Area by Barangay by District, 2010	17
2.2	Monthly Temperature, 2009-2010	30
2.3	Monthly Wind Velocity, 2009-2010	30
Chapter 3 Social Sector		
3.1	Population Trend by Barangay, 2010	45
3.2	Housing Situation for the last Two Censal Year, 2000 & 2010	46
3.3	Housing Backlog, 2010	46
3.4	Current & Project Needs for Housing	48
3.5	Resettlement Housing Project for Typhoon Sendong Victims, as of 2 nd Quarter of 2012	48
3.6	Technical Findings on Housing	49
3.7	List of Hospitals in Cagayan de Oro City	51
3.8	Utilization of Government Hospitals Services and Cost/Patient Day, 2009	53
3.9	Leading Causes of Infant Death	57
3.10	Leading Causes of Death (All Ages)	57
3.11	Prevalence Rate of Sexually Transmitted Infections, 2011	58
3.12	Malnourished Children for the Last Three Years, 2009-2011	59
3.13	Existing Cemeteries and Memorial Parks, 2011	60

CLUP Volume 3 – The Sectoral Studies

Tables	Title	Pages
3.14	Medical Health Facilities and Personnel, 2011	62
3.15	Current & Project Needs for Health	63
3.16	Technical Findings on Health	64
3.17	Ten Leading Causes of Morbidity for the last three (3) years, All Ages	68
3.18	Ten Leading Causes of Mortality for the last three (3) years, All Ages	68
3.19	No. of Households in Occupied Housing Units by Type of Toilet Facilities, 2010	69
3.20	Solid Waste Generation by Source, 2011	69
3.21	Methods of Solid Waste Disposal/Treatment, 2011	69
3.22	CCA+DRR Connectivity for Health	70
3.23	School by Level, Type, Facilities and Condition, 2010-2011, Elementary Level	75
3.24	School by Level, Type, Facilities and Condition, 2010-2011, Secondary Level	76
3.25	Student Teacher & Student Classroom Ratio by Level, 2011-2012	77
3.26	Tertiary & Vocational/Technical Schools by Type and Total Enrolment, 2011-2012	78
3.27	Historical Enrollment by Level for the Last Three (3) School Years	78
3.28	Projected Classrooms, Teacher Requirement in Public School by Level	79
3.29	Historical Enrollment Participation Rate for the Last Five (5) Years	79
3.30	Crucial Needs and Future Requirements for Education, Elementary and Secondary Level	79
3.31	Projection of Enrollment in the Tertiary Level	80
3.32	Education Issue Matrix	82
3.33	Vulnerability Analysis on Flooding (Elementary and Secondary Level)	83
3.34	Vulnerability Analysis on Flooding (Tertiary Level)	84
3.35	CCA+DRR Connectivity on Education (Elementary and Secondary Level)	84
3.36	CCA+DRR Connectivity on Education (Tertiary Level))	85
3.37	Protective Services Issue Matrix	91
3.38	Crime Incidence by Type, by Sex of Offender, 2009-2011	93
3.39	Current & Projected Requirements for Police & Firemen	94
3.40	CCA+DRR Connectivity on Protective Services	94
3.41	Sports and Recreation Issue Matrix	98
3.42	CCA+DRR Connectivity on Sports & Recreation	98
3.43	Vulnerability on Sports and Recreation	99
3.44	Social Welfare Services Analysis Matrix	104
3.45	CCA+DRR Connectivity on Social Welfare Services	105

CLUP Volume 3 – The Sectoral Studies

Tables	Title	Pages
3.46	Historical Number of Population Served by Type of Clientele System	106
3.47	Social Welfare Related Projects, Approved/Funded for Implementation, 2010	107
Chapter 4 Economic Sector		
4.1	Inventory of Existing Industrial Establishments by Manufacturing/Industrial Process; Raw Material Input Production and markets	128
4.2	Local Revenue of Manufacturing Establishments, 2006-2012	129
4.3	Volume & Value of Exports & Imports	130
4.4	Estimated Damage of TS Sendong to Major Industry Sectors, CDO	132
4.5	Technical Findings on Industry	134
4.6	Inventory of Commercial Areas	136
4.7	List of Business Permits Issued by Type	137
4.8	Inventory of Commercial Establishments, Banking Institution	139
4.9	New Business in the City for 2005-2012	139
4.10	Revenues Generated on Business Taxes and Fees	140
4.11	Existing Programs and Projects for Commerce and Trade, 2011	140
4.12	Technical Findings on Commerce and Trade	144
4.13	Area of Crops Harvested	146
4.14	Major Agriculture Crops by Area, 2007-2010	147
4.15	Major Agriculture Crops by Volume & Value of Crops Harvested	148
4.16	Comparative Agricultural Crops Area and Production	148
4.17	Agricultural Support Facilities and Services, 2012	149
4.18	Major and Minor Agricultural Occupations Groups in Urban and Rural Areas of Cagayan de Oro City, 2011	150
4.19	Agrarian Related Concerns	150
4.20	Livestock & Poultry Population	151
4.21	Slaughtered Animals by Species	152
4.22	Existing Fishing Grounds and Agriculture Production, 2011	153
4.23	Area and Location of Forestlands by Sub-Category and Primary Use, 2010	154
4.24	Volume of Production by Forest Concessionaires	154
4.25	Area Utilization of Significant Agricultural Activities	156
4.26	Agriculture and Fishery Resources Utilization Analysis, 2011	156
4.27	Technical Findings on Agriculture	161
4.28	Agriculture Related Projects, Approved/Funded for Implementation	164
4.29	Inventory of Tourist Attractions, 2011	166

CLUP Volume 3 – The Sectoral Studies

Tables	Title	Pages
4.30	Accessibility of Existing Tourism Establishments & Tourist Attraction, 2011	169
4.31	Facilities in Existing Tourism Establishments and Market Catered, 2006-2010	171
4.32	Number of Tourism Facilities/Accommodations by Type, 2007-2011	174
4.33	Registered Travel Agency as of February 2012	175
4.34	Registered Travel Agency as of March 2012	177
4.35	List of Restaurants in Cagayan de Oro City, 2012	178
4.36	Inventory of Tourist by Country of Origin, 2006-2010	182
4.37	Domestic & Foreign Arrivals	183
4.38	Cultural and Tourism Activities/Festivals	184
4.39	Potential Tourist Attractions in the Locality	185
4.40	Technical Findings on Economic-Land Use-Environment	187
Chapter 5 Infrastructure and Utilities Sector		
5.1	Inventory of Roads by System Classification and Type of Pavement, 2012	207
5.2	Flooded Road during TS Sendong, Cagayan de Oro City	212
5.3	Existing Bridges along National Roads by Location, Type and Condition, 2012	213
5.4	Inventory of Bridges along City Roads by Location, Type and Condition, 2012	214
5.5	Inventory of Ancillary Road Facilities, 2012	215
5.6	Inventory of Public Land Transportation Vehicles by Type, 2012	215
5.7	Land Transportation Terminals by Location and Condition, 2012	216
5.8	Road Accidents by Nature, Damage Cost and Frequency, 2020-2012	216
5.9	Shipcalls at Port of Cagayan de Oro	217
5.10	Schedule of Flights, 2010	218
5.11	CCA+DRR Connectivity on Transportation	219
5.12	Sectoral Analysis Matrix, Transportation	221
5.13	Transport related Projects, Approved/Funded for Implementation	222
5.14	Number of Households Served by Distribution Utility, 2012	224
5.15	Number of Connections by Type of Users and Average Consumption, 2010	225
5.16	Projected Power Requirements by Type of Connections (KWH)	225
5.17	Sectoral Analysis Matrix, Power	226
5.18	Source of Water supply System by Type and Number of Household Population Served, 2012	227
5.19	Level 1 Water Supply System by Type and Number of Population Served in Major Developments in Cagayan de Oro City	228

CLUP Volume 3 – The Sectoral Studies

Tables	Title	Pages
5.20	Projected Water Demand Summary	229
5.21	Sectoral Analysis Matrix, Water	230
5.22	Barangays not Served by COWD as of 2012	232
5.23	Damaged COWD Facilities during TS Sendong	233
5.24	DRR-CCA Connectivity Matrix, Water	234
5.25	Inventory of Cell Sites, Cagayan de Oro City, 2012	235
5.26	Cell Sites affected during TS Sendong	236
5.27	Damaged Facilities by Typhoon Sendong	237
5.28	Type of Print Media Available in Cagayan de Oro City	240
5.29	Sectoral Analysis Matrix, ICT	241
5.30	Estimated Volume of Garbage Collected and Disposed at City Dumpsite from January to December 2011	243

LIST OF FIGURES

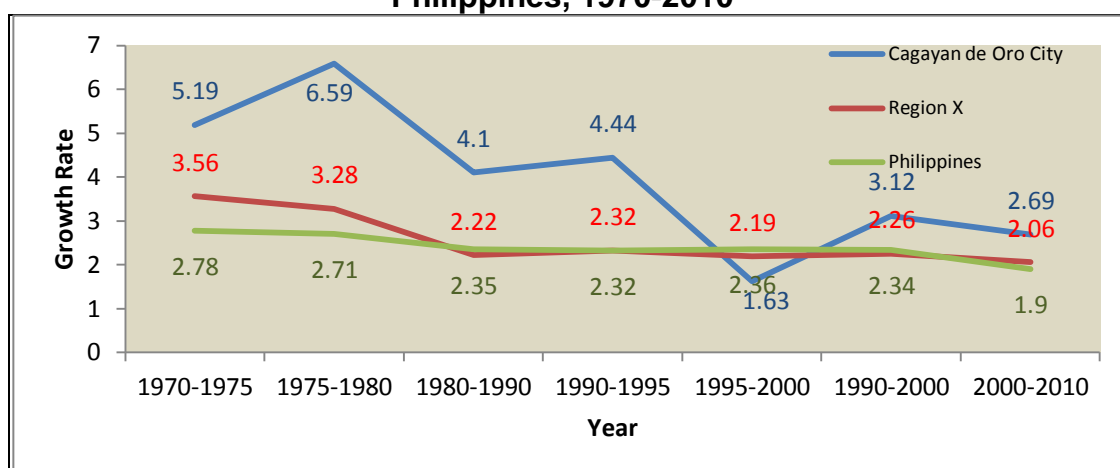
Figures	Title	Pages
Chapter 1 Demography		
1.1	Population Growth Patterns, Region X, Philippines, 1990-2010	1
1.2	Age-Sex Pyramid of Population, 2010	1
1.3	Top 10 Most Populated Barangays, 2010	3
1.4	Tempo of Urbanization	3
1.5	Historical Growth of Population	4
1.6	Percentage Increase or Decrease of Population	5
1.7	Rate of Natural Increase (RNI)	11
Chapter 2 Physical Environment		
2.1	Topographic Map	21
2.2	Slope Map	22
2.3	Geologic Map	23
2.4	Soil Map	24
2.5	Erosion Map	25
2.6	Minerals Map	26
2.7	Groundwater Map	27
2.8	Climate Map	28
2.9	Climatological Data, 2009-2010	29
2.10	Land Classification Map	33
2.11	Land Cover Map	34
2.12	Watershed Map	35
Chapter 3 Social Sector		
3.1	Map Showing Relocation Sites of Typhoon Sendong Survivors	40
3.2	Population and Number of Households for the Last Three (3) Censal Years	44
3.3	Population vs. Household, 2010-2022	44
3.4	Population Growth Rate, 2010	46
3.5	Housing & Utilities, 2010	47
3.6	Tenure States, 2007	47
3.7	Health Facilities Map	52
3.8	Referral Flow from highland District to nearest public and private hospitals in CDO City	54
3.9	Maternal Mortality Rate, 2006-2011	54
3.10	Leading Causes of Maternal Mortality per 1,000 Live births, 2011	55
3.11	Rate of Facility-Based Birth Deliveries, 2005-2009	55
3.12	Infant Mortality Rate 2006-2011	55
3.13	Mapping & Infant Deaths	56
3.14	Malnutrition Status for the last three years, 2009-2011	60
3.15	Educational Facilities Map	74
3.16	Protective Services Map	89

Figures	Title	Pages
3.17	Distribution of Crimes by Type, 2009-2011	93
3.18	Social Welfare Facilities Map	102
Chapter 4 Economic Sector		
4.1	Business Establishments by Major Industry Division	130
4.2	Breakdown of Business Permits Issued by Type	137
4.3	SAFDZ Map	158
4.4	Tourism Map showing Tourist Attractions	168
4.5	Tourism Map showing Tourism Establishments	173
Chapter 5 Infrastructure and Utilities Sector		
5.1	Transport Network Map	209
5.2	Flooded Area of Cagayan de Oro during TS Sendong	211
5.3	Cell Sites Map	239
5.4	Comparative flow of solid waste volume collected and dumped at City Dumpsite from 2010 to May 2012	246

Chapter 1 Demography

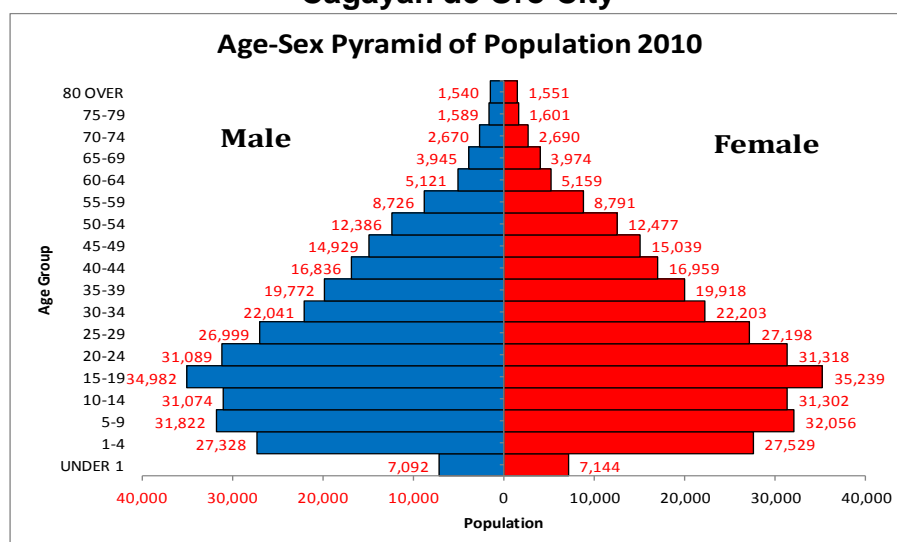
1.1 Population Composition

Figure 1.1
Population Growth Patterns of Cagayan de Oro City, Region X, Philippines, 1970-2010



Cagayan de Oro City's population reached 602,088 persons as of May 1, 2010 (NSO actual), which is 74 percent of the total provincial population of 813,856. This represents an increase of 140,211 persons over the total population of 461,877 in 2000. This translates to an annual population growth rate of 2.69 percent between 2000 and 2010. It is expected that the population will double in 26 years or in 2036.

Figure 1.2
Age-Sex Pyramid of Population, 2010
Cagayan de Oro City



As of 2010, the City has 598,803 total household populations with an average household size of 4.4. The household population comprises 298,681 males or about 49.9 percent and 300,122 females or 50.1 percent from the total households. Above graph shows that males were almost the same in females having a ratio of 99.5 males for every 100 females. About 28.5 percent of the total household population belongs to the age group 1-14 years old. Productive population (ages 15-64 years old) comprise 66 percent, while 3.4 percent of the household population are elders (above 65 years old).

The proportion of household population belonging to age group 0-4 is 10.6 percent and this is made up of 5.5 percent male and 5.1 percent female.

Table 1.1
Household Population by Age-Group and Sex, 2010
Cagayan de Oro City

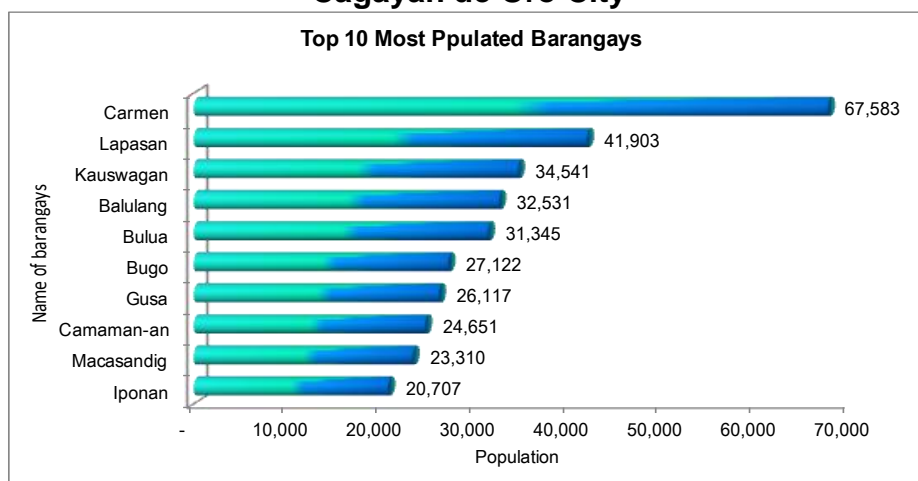
Age group	Both Sexes	Male	Female	Sex Ratio
Total	598,803	298,681	300,122	99.5
Under 1	12,575	6,403	6,172	103.7
1-4	50,692	26,507	24,185	109.6
5-9	60,924	31,504	29,420	107.1
10-14	59,029	29,931	29,098	102.9
15-19	64,387	30,806	33,581	91.7
20-24	62,288	30,663	31,625	97
25-29	52,744	26,237	26,507	99
30-34	47,535	24,014	23,521	102.1
35-39	40,457	20,480	19,977	102.5
40-44	35,751	17,833	17,918	99.5
45-49	31,133	15,417	15,716	98.1
50-54	27,062	13,318	13,744	96.9
55-59	20,450	10,139	10,311	98.3
60-64	13,684	6,776	6,908	98.1
65-69	7,643	3,507	4,136	84.8
70-74	5,867	2,567	3,300	77.8
75-79	3,481	1,401	2,080	67.4
80 & Over	3,101	1,178	1,923	61.3

Source: National Statistics Office 2010 Census of Population and Housing

Youth dependency ratio (ages 0-14) is 30.6 percent while the elderly dependency ratio (65 years old and over) is 3.4 percent from the total household. Overall, the dependency ratio of the city reached 51.4 percent. This indicates that for every 100 persons ages 15-64 years old (working age population), about 51 are economically dependent, (46 young dependent and 5 old dependents). This ratio is also lower compared to the 2000 figure of 61 persons per working age population. This decrease in dependency ratio indicates that more people are in the work force.

1.2 Population Distribution

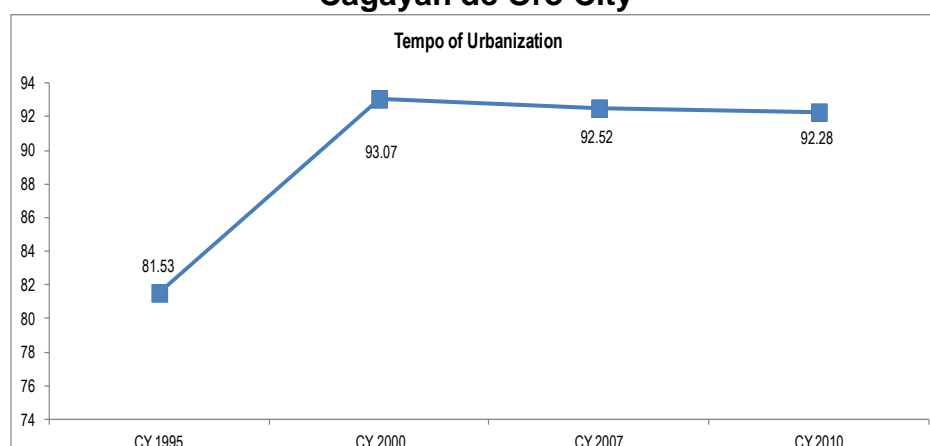
Figure 1.3
Top 10 Most Populated Barangays, 2010
Cagayan de Oro City



Based on 2010 data on population, the total urban and rural population reached 111,121 and 9,297, respectively. The above graph shows that Barangay Carmen has the highest number in population which is 11.22 percent from the total population while Barangay 39 has the lowest population 0.01 city population share.

The average population density of the city is 11 persons per hectare. The most densely populated barangay is Barangay Macabalan with a population density of 450 persons per hectare. It is followed by Barangay 35 (Poblacion): 319 persons per hectare, and Barangay 18: 318 persons per hectare. Barangay Tignapoloan has the lowest population density of about 0.61 persons per hectare.

Figure 1.4
Tempo of Urbanization
Cagayan de Oro City



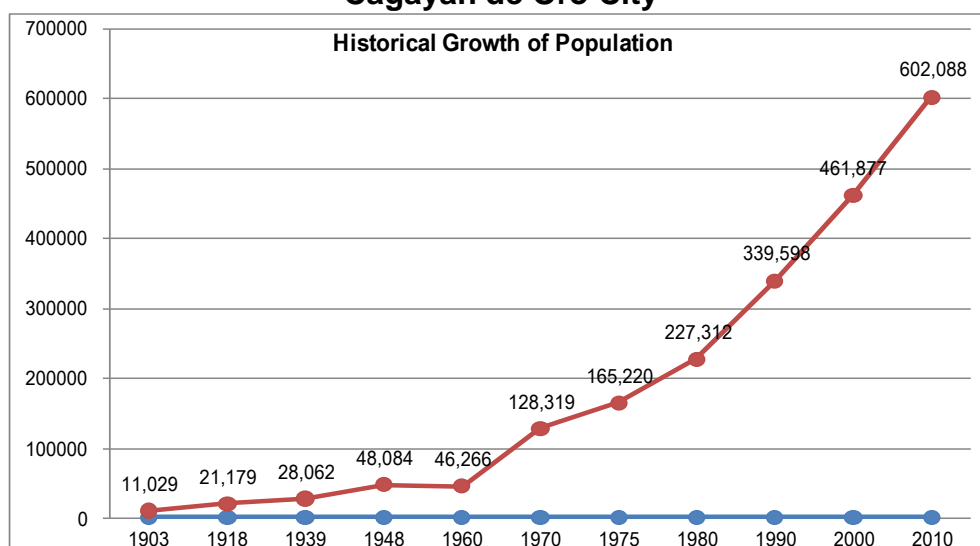
The graph shows marginal decline of the tempo of urbanization.

The City has 66 urban barangays, 15 of which were considered as the location for the essential and non-essential establishments and the center for trade and commerce. Being one of the fastest growing cities in the country, Cagayan de Oro City is considered as a favorite investment area and a haven for the tourists.

The rural barangays serves as the food basket which provides food requirements of the city and its neighboring towns.

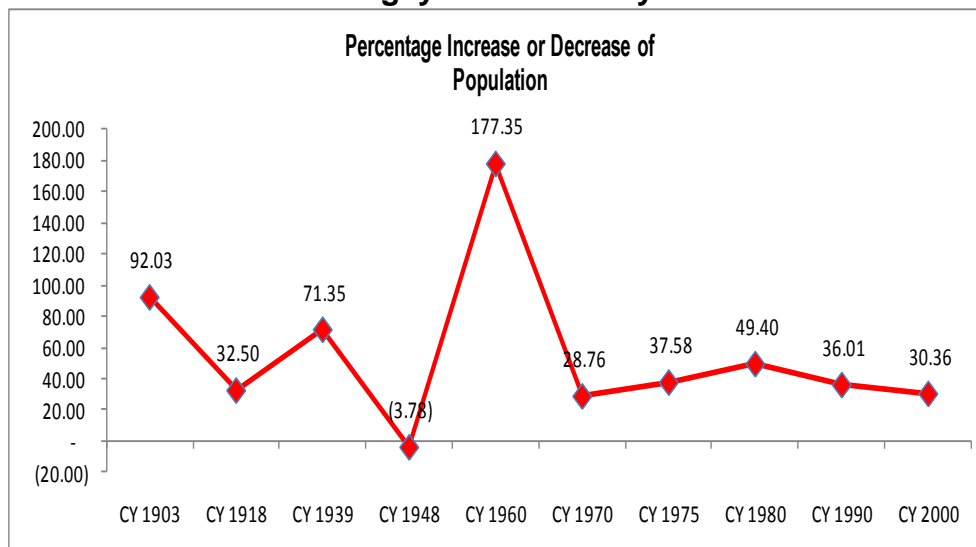
1.3 Population Changes

Figure 1.5
Historical Growth of Population
Cagayan de Oro City



Since the first census year 1903, the City's population has been increasing except in 1948 and 1960. After 1960, the City posted significant increases in population mainly brought by migration - people from neighboring provinces, cities and municipalities coming to the city for job and income opportunities.

Figure 1.6
Percentage Increase or Decrease of Population
Cagayan de Oro City



1.4 Other Population Characteristics

Roman Catholic is the most dominant religion followed by Iglesia Filipina Independiente, Protestant, Baptists, Iglesia ni Cristo, Seventh Day Adventist, Islam and other religions. “Cebuano” is the dominant dialect spoken.

Cagayan de Oro has an indigenous community who settled in some areas of its rural barangays. About 95.15 percent of the population 10 years old and above are literate.

The city’s coastal and nearby river barangays such as: Lapasan, Cugman, Carmen, Tablon, Kauswagan, Macasandig, Balulang, Agusan, Baikiong, Pagatpat, Iponan, Bulua, Canitoan, Puntod, Macabalan, Consolacion, Bugo, Balubal, Patag, San Simon, Barangay 10, 13, 14, 15, 11, 6, 7 (Poblacion) are considered susceptible to flooding during heavy rains and high tide. Sea and river waters may overflow due to continuous rainfall. All barangays are prone to various hazards (hydro-meteorological and climate related hazards) which may affect many lives and properties or paralyze the socio-economic development of the locality.

1.5 Population Projection and Estimates

With an annual growth rate of 2.69%, the population of Cagayan de Oro is projected to reach 827,600 in 2022 from 602,088 in 2010. Barangay Carmen will still have the most number of people, while Barangay 39 will have the lowest population count. The labor force will still be the biggest age group as well.

Table 1.2
Population Composition by School-Age, Dependent-Age, Age Group and Sex, 2010
Cagayan de Oro City

Grouping	Both Sexes	Male		Female		Sex Ratio
		No.	%	No.	%	
Population	602,088	299,942	49.82	302,146	50.18	99.27
School going Pop'n						
Pre-school (3-6)	40,248	20,050	3.33	20,198	3.35	
Elementary (7-12)	88,794	44,234	7.35	44,559	7.40	
Secondary (13-16)	51,748	25,779	4.28	25,969	4.31	
Tertiary (17-21)	69,661	34,703	5.76	34,958	5.81	
Working Age (15-64)	387,180	192,882	32.04	194,299	32.27	
Labor Force (15 & up)	406,741	202,626	33.65	204,115	33.90	
Dependent						
Young (0-14)	195,347	97,316	16.16	98,031	16.28	
Old (65 & over)	19,560	9,744	1.62	9,816	1.63	

Source: National Statistics Office – City Planning & Development Office

Table 1.3
Household Population by Urban and Rural Barangays
(Average Household Size of 4.4), 2010
Cagayan de Oro City

Barangays	Population	Number of Households
Cagayan de Oro City	602,088	137,465
Urban	555,605	127,213
Agusan	14,812	3438
Balulang	32,531	7868
Bayabas	12,999	2959
Bonbon	9,195	2093
Bugo	27,122	6303
Bulua	31,345	7036
Camaman-an	24,651	5492
Canitoan	15,069	3343
Carmen	67,583	15360
Consolacion	9,919	2435
Cugman	20,531	4538
Gusa	26,117	5773
Iponan	20,707	4838
Kauswagan	34,541	7598
Lapasan	41,903	9624
Lumbia	14,079	3044
Macabalan	20,303	4470

CLUP Volume 3 – The Sectoral Studies

Macasandig	23,310	5203
Nazareth	10,658	2526
Patag	17,219	1188
Puerto	11,475	2518
Puntod	18,399	4366
Tablon	18,608	4685
Barangay 1	453	115
Barangay 2	84	21
Barangay 3	177	42
Barangay 4	108	29
Barangay 5	83	18
Barangay 6	212	38
Barangay 7	542	131
Barangay 8	157	40
Barangay 9	132	38
Barangay 10	616	139
Barangay 11	342	93
Barangay 12	469	101
Barangay 13	2,330	542
Barangay 14	479	99
Barangay 15	2,966	760
Barangay 16	143	35
Barangay 17	2,342	554
Barangay 18	1,496	350
Barangay 19	419	97
Barangay 20	121	32
Barangay 21	254	82
Barangay 22	1,944	444
Barangay 23	916	215
Barangay 24	929	243
Barangay 25	1,295	324
Barangay 26	2,383	574
Barangay 27	1,380	292
Barangay 28	541	125
Barangay 29	485	131
Barangay 30	875	203
Barangay 31	1,506	338
Barangay 32	1,410	380
Barangay 33	86	29
Barangay 34	621	148
Barangay 35	2,395	523
Barangay 36	791	215
Barangay 37	77	31
Barangay 38	94	32

Barangay 39	46	8
Barangay 40	830	178
Rural	46,483	10,252
Baikingon	2,342	621
Balubal	2,893	648
Bayanga	2,769	623
Besigan	1,404	257
Dansolihon	4,811	991
FS Catanico	1,710	404
Indahag	6,235	1448
Mambuaya	2,490	533
Pagalungan	1,806	418
Pagatpat	5,178	1188
Pigsag-an	1,256	214
San Simon	1,346	318
Taglimao	1,418	308
Tagpangi	2,684	618
Tignapoloan	4,514	899
Tuburan	1,395	288
Tumpagon	2,232	476

Source: National Statistics Office /National Statistics Coordination Board

Table 1.4
Population Density, 2010
Cagayan de Oro City

Barangay	Population Density (person per hectare)
Cagayan de Oro City	10.57
<i>Urban</i>	<i>28.13</i>
Agusan	29.89
Balulang	36.96
Bayabas	73.37
Bonbon	79.01
Bugo	33.60
Bulua	47.41
Camaman-an	33.68
Canitoan	12.20
Carmen	70.65
Consolacion	200.57
Cugman	11.75
Gusa	37.51
Iponan	34.11
Kauswagan	67.39
Lapasan	184.38
Lumbia	4.24

Macabalan	449.68
Macasandig	58.63
Nazareth	156.03
Patag	57.40
Puerto	12.92
Puntod	111.58
Tablon	4.24
Barangay 1	42.73
Barangay 2	22.88
Barangay 3	23.01
Barangay 4	39.25
Barangay 5	32.26
Barangay 6	49.02
Barangay 7	90.61
Barangay 8	43.71
Barangay 9	42.43
Barangay 10	128.48
Barangay 11	104.53
Barangay 12	205.23
Barangay 13	266.79
Barangay 14	107.45
Barangay 15	302.83
Barangay 16	55.58
Barangay 17	303.88
Barangay 18	316.94
Barangay 19	160.59
Barangay 20	57.62
Barangay 21	53.82
Barangay 22	164.86
Barangay 23	111.09
Barangay 24	78.56
Barangay 25	247.84
Barangay 26	269.36
Barangay 27	141.03
Barangay 28	74.58
Barangay 29	23.99
Barangay 30	139.79
Barangay 31	76.55
Barangay 32	158.09
Barangay 33	10.31
Barangay 34	152.81
Barangay 35	319.04
Barangay 36	118.12
Barangay 37	27.61
Barangay 38	25.14
Barangay 39	19.81
Barangay 40	61.00

<i>Rural</i>	1.25
Baikingon	3.47
Balubal	4.01
Bayanga	2.01
Besigan	0.25
Dansolihon	0.66
FS Catanico	1.55
Indahag	4.44
Mambuaya	2.25
Pagalungan	1.68
Pagatpat	4.71
Pigsag-an	1.18
San Simon	1.00
Taglimao	1.13
Tagpangi	1.23
Tignapoloan	0.61
Tuburan	1.34
Tumpagon	1.55

Table 1.5
Historical Growth of Population, 1903-2010
Cagayan de Oro City

Year	Population	Increase/Decrease	Growth Rate %	Growth Rate		
				Provincial	Regional	National
1903	11,029	92%				
1918	21,179	32.5%				
1939	28,062	71.3%				
1948	48,084	-3.8%				
1960	46,266	177.35%				
1970	128,319	28.8%	5.19		3.56	2.78
1975	165,220	37.6%	6.59		3.28	2.71
1980	227,312	49.4%	4.10		2.22	2.35
1990	339,598	36.0%	4.44		2.32	2.32
2000	461,877	30.4%	2.54		1.67	2.04
2010	602,088		2.69			

Source: National Statistics Office (NSO)

Table 1.6
Crude Birth Rate (CBR) and Crude Death Rate (CDR) for the Last Five Years, 2006-2010, Cagayan de Oro City

Period	CBR (per 1,000 people)	% Increase/Decrease from Previous Year	CDR (per 1,000 people)	% Increase/Decrease from Previous Year
2006	23.90	2.51	6.00	0.20
2007	24.50	2.50	7.29	0.0
2008	25.12	-1.27	7.29	4.11
2009	24.80	-1.00	7.59	0.0
2010	24.55	40.98	7.59	
2011	14.49			

Source: City Planning & Development Office (CPDO)

Figure 1.7
Rate of Natural Increase, 2006-2010
Cagayan de Oro City

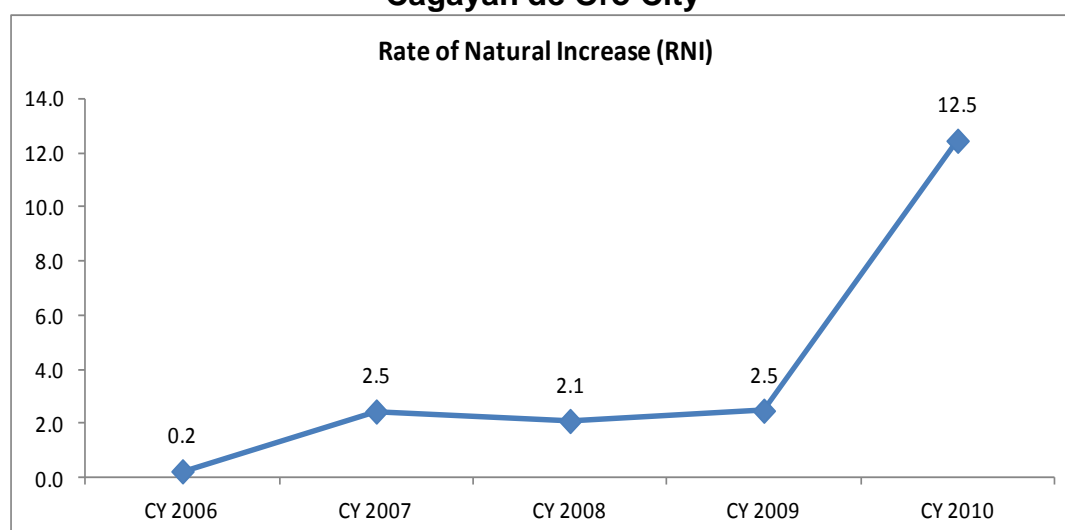


Table 1.7
Literacy Rate of Population 10 years old and over, by sex, 2008
Cagayan de Oro City

	Both Sexes	Male	Female
	No.	No.	No.
Population 10 years old over	441,664	220,024	225,142
Simple Literate	414,722	206,602	211,408
Functional Literate	379,389	189,00	193,397

Source: NSO Regional Data (2007 population and literacy rates) / CPDO (projected 2008 population)

Simple Literacy Rate used is 93.90 %

Functional Literacy Rate is 85.90 %

Table 1.8
Labor Force Population by Age Group and Sex, 2010
Cagayan de Oro City

Age Group	Both Sexes	Percentage	Male	Percentage	Female	Percentage
Total	387,180	100.00	192,882	49.82	194,299	50.18
15-19	70,220	18.14	34,982	9.03	35,239	9.10
20-24	62,407	16.12	31,089	8.03	31,318	8.09
25-29	54,197	14.00	26,999	6.97	27,198	7.02
30-34	44,243	11.43	22,041	5.69	22,203	5.73
35-39	39,690	10.25	19,772	5.11	19,918	5.14
40-44	33,795	8.73	16,836	4.35	16,959	4.38
45-49	29,968	7.74	14,929	3.86	15,039	3.88
50-54	24,863	6.42	12,386	3.20	12,477	3.22
55-59	17,517	4.52	8,726	2.25	8,791	2.27
60-64	10,280	2.65	5,121	1.32	5,159	1.33

Source: National Statistics Office

Table 1.9
Overseas Workers as of 2010 by Age Group and Sex
Cagayan de Oro City

Age Group	Both Sexes	Male	Female
Below 20	236	113	123
20-24	475	218	257
25-29	1,239	654	585
30-34	1,555	958	597
35-39	1,440	964	476
40-44	1,104	727	377
45 and over	1,896	1,337	559
TOTAL	7,945	4,971	2,974

Source: National Statistics Office

Table 1.10
Household Population 5 years old and over by Highest Educational Attainment, 2010
Cagayan de Oro City

Highest Attainment	Male		Female		Both Sexes	
	No.	%	No.	%	No.	%
Total	265,771	49.63	269,765	50.37	535,536	100.00
No Grade Completed	7,176	2.70	6,373	2.36	13,549	2.53
Pre School	9,341	3.52	8,685	3.22	18,026	3.37
Elementary	72,097	27.13	63,723	23.62	135,820	25.36
1 st – 4 th Grade						
5 th – 6 th Grade						
High School	90,809	34.17	96,789	35.88	187,598	35.03

Under Graduate						
Graduate						
Post-Secondary	7,882	2.97	6,455	2.39	14,337	2.68
Under Graduate						
Graduate						
College Under Graduate	38,991	14.67	45,691	16.94	79,750	14.89
Post Baccalaureate	1,077	0.41	1,285	0.48	2,362	0.44
Not Stated	-		5	0.00	5	0.00

Table 1.11
Projected Population and Households
Cagayan de Oro City

Year	Total Population	Total Household Population
2010	602,088	598,803
2011	618,263	614,911
2012	634,873	631,452
2013	651,929	648,438
2014	669,443	665,881
2015	687,427	683,783
2016	705,895	702,187
2017	724,859	721,076
2018	744,332	740,473
2019	764,329	760,392
2020	784,863	780,846
2021	805,948	801,851
2022	827,600	823,421

Source: National Statistics Office (actual count 2010)-CPDO (projected population)

Table 1.12
Urbanization Level for the Past 20 years
Cagayan de Oro City

Year	Barangay Population			Tempo of Urbanization
	Urban	Rural	Total	
1970				
1975				
1980				
1990				
1995	349,185	79,129	428,314	81.53
2000	429,851	32,026	461,877	93.07
2007	512,521	41,445	553,966	92.52
2010	555,602	46,483	602,088	92.28

Source: City Planning & Development Office (CPDO)

Table 1.13
Population Projection by Barangay
Cagayan de Oro City

PROJECTED POPULATION OF CAGAYAN DE ORO CITY, 2011-2022														
BARANGAY	NSO Actual 2000	NSO Actual 2010	Population Estimates											
			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CAGAYAN DE ORO CITY	461,877	602,088	618,263	634,873	651,929	669,443	687,427	705,895	724,859	744,332	764,329	784,863	805,948	827,600
DISTRICT 1	204,061	290,913	301,414	312,294	323,567	335,247	347,348	359,886	372,877	386,336	400,282	414,731	429,701	445,212
BAIKINGON	1,988	2342	2,381	2,420	2,460	2,501	2,542	2,584	2,627	2,670	2,714	2,759	2,805	2,851
BALULANG	20,894	32531	34,004	35,543	37,152	38,834	40,592	42,429	44,350	46,357	48,456	50,649	52,942	55,339
BAYABAS	5,570	12999	14,149	15,400	16,762	18,244	19,858	21,614	23,526	25,607	27,871	30,336	33,019	35,940
BAYANGA	2,087	2769	2,848	2,930	3,014	3,101	3,190	3,281	3,375	3,472	3,571	3,674	3,779	3,888
BESIGAN	797	1404	1,486	1,572	1,664	1,761	1,863	1,972	2,087	2,208	2,337	2,473	2,617	2,770
BONBON	7,983	9195	9,326	9,459	9,593	9,730	9,868	10,009	10,151	10,296	10,442	10,591	10,742	10,895
BULUA	23,384	31345	32,277	33,237	34,225	35,243	36,291	37,370	38,481	39,625	40,803	42,016	43,266	44,552
CANITOAN	9,751	15069	15,739	16,440	17,171	17,935	18,733	19,566	20,437	21,346	22,295	23,287	24,323	25,405
CARMEN	47,188	67583	70,055	72,617	75,273	78,026	80,880	83,838	86,904	90,083	93,378	96,793	100,333	104,003
DANSOLIHON	3,302	4811	4,996	5,187	5,386	5,593	5,807	6,030	6,261	6,501	6,751	7,010	7,278	7,558
IPONAN	9,514	20707	22,382	24,192	26,148	28,263	30,549	33,019	35,690	38,576	41,696	45,068	48,713	52,653
KAUSWAGAN	28,761	34541	35,179	35,830	36,492	37,166	37,853	38,553	39,265	39,991	40,730	41,483	42,249	43,030
LUMBIA	7,222	14079	15,051	16,090	17,201	18,388	19,658	21,015	22,465	24,016	25,674	27,446	29,341	31,367
MAMBUAYA	1,452	2490	2,628	2,774	2,927	3,090	3,261	3,441	3,632	3,833	4,046	4,270	4,507	4,756
PAGALUNGAN	1,815	1806	1,805	1,804	1,803	1,802	1,802	1,801	1,800	1,799	1,798	1,797	1,796	1,795
PAGATPAT	2,508	5178	5,567	5,986	6,436	6,920	7,440	7,999	8,601	9,248	9,943	10,690	11,494	12,358
PATAG	18,212	17219	17,123	17,027	16,932	16,837	16,743	16,649	16,556	16,464	16,372	16,280	16,189	16,099
PIGSAG-AN	866	1256	1,304	1,353	1,404	1,457	1,513	1,570	1,629	1,691	1,755	1,822	1,891	1,962
SAN SIMON	1,085	1346	1,375	1,405	1,436	1,467	1,499	1,532	1,565	1,599	1,634	1,670	1,706	1,743
TAGLIMAO	1,054	1418	1,461	1,505	1,550	1,597	1,645	1,694	1,745	1,798	1,852	1,908	1,965	2,024
TAGPANGI	2,737	2684	2,679	2,674	2,668	2,663	2,658	2,653	2,648	2,642	2,637	2,632	2,627	2,622
TIGNAPOL OAN	3,764	4514	4,597	4,681	4,767	4,854	4,943	5,034	5,126	5,220	5,316	5,413	5,513	5,614
TUBURAN	861	1395	1,464	1,536	1,612	1,692	1,776	1,863	1,956	2,052	2,154	2,260	2,372	2,489
TUMPAGON	1,266	2232	2,362	2,500	2,646	2,800	2,964	3,137	3,320	3,513	3,718	3,935	4,165	4,408
DISTRICT 2	257,816	311,175	317,084	323,105	329,240	335,492	341,863	348,355	354,970	361,710	368,579	375,577	382,709	389,977
AGUSAN	12,278	14812	15,093	15,378	15,670	15,966	16,269	16,577	16,891	17,211	17,537	17,869	18,207	18,552
BALUBAL	2,356	2893	2,953	3,014	3,077	3,141	3,206	3,272	3,340	3,409	3,480	3,552	3,626	3,701
BUGO	22,442	27122	27,641	28,169	28,708	29,257	29,816	30,386	30,967	31,559	32,163	32,778	33,405	34,043
CAMAMAN-AN	21,123	24651	25,035	25,424	25,820	26,222	26,630	27,045	27,466	27,893	28,327	28,768	29,216	29,671
CONSOLACION	8,786	9919	10,040	10,163	10,287	10,412	10,539	10,668	10,798	10,930	11,063	11,198	11,335	11,473
CUGMAN	15,607	20531	21,102	21,688	22,291	22,911	23,548	24,203	24,876	25,567	26,278	27,009	27,759	28,531
FS CATANICO	1,365	1710	1,749	1,789	1,830	1,871	1,914	1,958	2,002	2,048	2,094	2,142	2,191	2,241
GUSA	18,500	26117	27,033	27,982	28,963	29,979	31,031	32,120	33,247	34,413	35,620	36,870	38,164	39,503

CLUP Volume 3 – The Sectoral Studies

INDAHAG	2,723	6235	6,774	7,359	7,994	8,685	9,435	10,250	11,135	12,097	13,142	14,277	15,510	16,849
LAPASAN	34,986	41903	42,666	43,443	44,233	45,039	45,859	46,693	47,543	48,409	49,290	50,188	51,101	52,031
MACABALAN	18,875	20303	20,452	20,601	20,752	20,904	21,057	21,211	21,366	21,523	21,680	21,839	21,999	22,160
MACASANDIG	17,691	23310	23,962	24,632	25,321	26,029	26,757	27,505	28,275	29,065	29,878	30,714	31,573	32,456
NAZARETH	10,731	10658	10,651	10,643	10,636	10,629	10,622	10,614	10,607	10,600	10,593	10,585	10,578	10,571
PUERTO	7,336	11475	12,000	12,549	13,123	13,724	14,352	15,008	15,695	16,413	17,164	17,949	18,770	19,629
PUNTOD	15,615	18399	18,703	19,013	19,327	19,647	19,972	20,302	20,638	20,980	21,327	21,679	22,038	22,403
TABLON	13,817	18608	19,170	19,750	20,346	20,961	21,594	22,247	22,919	23,612	24,325	25,060	25,818	26,598
BARANGAY 1	534	453	446	438	431	424	417	410	404	397	391	384	378	372
BARANGAY 2	188	84	77	71	66	61	56	52	48	44	41	38	35	32
BARANGAY 3	248	177	171	165	160	155	150	145	140	135	131	126	122	118
BARANGAY 4	190	108	102	96	91	86	81	77	73	69	65	61	58	55
BARANGAY 5	64	83	85	87	90	92	95	97	100	102	105	108	110	113
BARANGAY 6	782	212	186	163	143	126	110	97	85	75	65	57	50	44
BARANGAY 7	603	542	536	531	525	519	514	508	503	498	492	487	482	477
BARANGAY 8	214	157	152	148	143	139	134	130	126	123	119	115	112	108
BARANGAY 9	219	132	125	119	113	108	102	97	93	88	84	80	76	72
BARANGAY 10	928	616	591	568	545	523	502	482	462	444	426	409	392	377
BARANGAY 11	410	342	336	330	324	318	312	307	301	296	290	285	280	275
BARANGAY 12	485	469	467	466	464	463	461	460	458	457	455	454	452	450
BARANGAY 13	2,375	2330	2,326	2,321	2,317	2,312	2,308	2,303	2,299	2,295	2,290	2,286	2,281	2,277
BARANGAY 14	643	479	465	452	439	426	413	401	390	378	367	357	346	336
BARANGAY 15	2,029	2966	3,081	3,200	3,324	3,452	3,586	3,725	3,869	4,019	4,174	4,336	4,503	4,678
BARANGAY 16	165	143	141	139	137	135	133	131	129	128	126	124	122	120
BARANGAY 17	2,327	2342	2,344	2,345	2,347	2,348	2,350	2,351	2,353	2,354	2,356	2,357	2,359	2,360
BARANGAY 18	1,762	1496	1,472	1,448	1,424	1,401	1,378	1,356	1,334	1,312	1,291	1,270	1,250	1,229
BARANGAY 19	457	419	415	412	408	405	401	398	394	391	388	384	381	378
BARANGAY 20	175	121	117	112	108	104	101	97	93	90	87	84	81	78
BARANGAY 21	377	254	244	235	226	217	208	200	193	185	178	171	165	158
BARANGAY 22	2,202	1944	1,920	1,896	1,873	1,849	1,827	1,804	1,782	1,760	1,738	1,716	1,695	1,674
BARANGAY 23	1,033	916	905	894	884	873	863	852	842	832	822	812	803	793
BARANGAY 24	868	929	935	942	948	955	961	968	974	981	988	994	1,001	1,008
BARANGAY 25	1,065	1295	1,321	1,347	1,373	1,400	1,428	1,456	1,485	1,514	1,544	1,575	1,606	1,637
BARANGAY 26	2,479	2383	2,374	2,364	2,355	2,346	2,336	2,327	2,318	2,309	2,300	2,291	2,282	2,273
BARANGAY 27	1,441	1380	1,374	1,368	1,362	1,356	1,350	1,345	1,339	1,333	1,327	1,322	1,316	1,310
BARANGAY 28	335	541	568	595	625	655	688	721	757	794	833	874	917	962
BARANGAY 29	737	485	465	446	428	410	393	377	362	347	333	319	306	294
BARANGAY 30	685	875	897	919	942	965	989	1,013	1,039	1,064	1,091	1,118	1,145	1,174
BARANGAY 31	1,654	1506	1,492	1,478	1,464	1,451	1,437	1,424	1,410	1,397	1,384	1,371	1,358	1,346
BARANGAY 32	1,280	1410	1,424	1,438	1,452	1,466	1,480	1,494	1,509	1,523	1,538	1,553	1,568	1,584
BARANGAY 33	92	86	85	85	84	84	83	83	82	81	81	80	80	79
BARANGAY 34	577	621	626	630	635	640	644	649	654	659	663	668	673	678
BARANGAY 35	2,023	2395	2,436	2,477	2,519	2,562	2,606	2,650	2,695	2,741	2,788	2,835	2,884	2,933
BARANGAY 36	830	791	787	783	780	776	772	768	765	761	757	754	750	747

CLUP Volume 3 – The Sectoral Studies

BARANGAY 37	359	77	66	57	49	42	36	31	26	22	19	17	14	12
BARANGAY 38	171	94	89	83	79	74	70	66	62	58	55	52	49	46
BARANGAY 39	54	46	45	45	44	43	42	42	41	40	40	39	39	38
BARANGAY 40	525	830	869	910	952	997	1,044	1,093	1,144	1,197	1,253	1,312	1,374	1,438

Source: City Planning & Development Office (CPDO)

Table 1.14
Projected School-Age Population, Labor Force and Dependent Population
Cagayan de Oro City

Grouping	Base Year 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Population	602,088	618,263	634,873	651,929	669,443	687,427	705,895	724,859	744,332	764,329	784,863	805,948	827,600
School-Going Pop'n													
Pre-School	40,248	41329	42439	43580	44750	45952	47187	48455	49756	51093	52466	53875	55323
Elementary	88,794	91179	93629	96144	98727	101379	104103	106900	109772	112721	115749	118858	122052
Secondary	51,748	53138	54566	56032	57537	59083	60670	62300	63973	65692	67457	69269	71130
Tertiary	69,661	71532	73454	75427	77454	79534	81671	83865	86118	88432	90807	93247	95752
Labor Force	406,741	417668	428889	440411	452243	464392	476868	489679	502834	516343	530215	544459	559086
Dependent													
Young (0-4)	195,347	200595	200984	211518	217200	223035	229027	235180	241498	247986	254648	261489	268514
Old (65&Over)	195,60	20086	20625	21180	21749	22333	22933	23549	24182	24831	25498	26183	26887

Source: City Planning & Development Office (CPDO)

Chapter 2 Physical Environment

2.1 Geography

2.1.1 Location

Cagayan de Oro City is the gateway to Northern Mindanao. It is geographically nestled between the central coastline of Macajalar Bay to the North and the naturally-rich plateaus and mountains of Bukidnon and Lanao del Norte to the South. The municipality of Opol bounds the City on the west while the municipality of Tagoloan, with its heavy industrial activities, is its immediate neighbor to the east. The City lies between the latitude 8°14'00" to 8°31'00" north and longitude 124°27'00" and 124°49'00" east.

2.1.2 Land Area

Cagayan de Oro City has a total land area of 57,851.00 hectares. Its territorial size is 2.82 percent of the region and 16.20 percent of Misamis Oriental.

The total land area of the city is based on the definitions set forth by Republic Act No. 521 Series of 1950, *an act creating the city of Cagayan de Oro* which was signed by then President Elpidio R. Quirino and of the 1994 Codified Ordinance which is a total extract of Resolution No. 6, Series of 1960 which defines the city's territory comprising the forty (40) urban and forty (40) rural barangays. This was further corroborated by the political subdivision survey commissioned and initiated by the DBM through the LMB-DENR's PRS 92 Project conducted last 2012 in accordance with DENR Administrative Order Nos. 98-12, s. 2010-13 and 2007-29 under the supervision of the Regional Executive Director, DENR-X, Cagayan de Oro City.

Table 2.1
Land Area by Barangay by District, 2010
Cagayan de Oro City

Barangay	Land Area (has.)	Barangay	Land Area (has.)
Cagayan de Oro City			57,851.00
District 1	43,637.40	Tablon	4,381.01
Baikingon	675.40	Barangay 1	10.60
Balulang	880.25	Barangay 2	3.67
Bayabas	177.17	Barangay 3	7.69
Bayanga	1,378.22	Barangay 4	2.75
Besigan	6,159.23	Barangay 5	2.57
Bonbon	116.28	Barangay 6	4.32
Bulua	661.21	Barangay 7	5.98
Canitoan	1,234.86	Barangay 8	2.92
Carmen	956.65	Barangay 9	3.11

CLUP Volume 3 – The Sectoral Studies

Dansolihon	7,267.19	Barangay 10	4.79
Iponan	607.14	Barangay 11	3.27
Kauswagan	512.53	Barangay 12	2.29
Lumbia	3,320.31	Barangay 13	8.73
Mambuaya	1,104.29	Barangay 14	4.46
Pagalungan	1,075.79	Barangay 15	9.79
Pagatpat	1,100.07	Barangay 16	2.57
Patag	299.90	Barangay 17	7.71
Pigsag-an	1,063.87	Barangay 18	4.72
San Simon	1,339.50	Barangay 19	2.61
Taglimao	1,256.36	Barangay 20	2.10
Tagpangi	2,174.96	Barangay 21	4.72
Tignapoloan	7,795.12	Barangay 22	11.79
Tuburan	1,037.51	Barangay 23	8.25
Tumpagon	1,443.59	Barangay 24	11.83
District 2	14,213.60	Barangay 25	5.23
Agusan	512.69	Barangay 26	8.85
Balubal	721.32	Barangay 27	9.79
Bugo	807.31	Barangay 28	7.25
Camaman-an	731.92	Barangay 29	20.21
Consolacion	49.45	Barangay 30	6.26
Cugman	1,747.61	Barangay 31	19.67
F.S. Catanico	1,101.03	Barangay 32	8.92
Gusa	696.18	Barangay 33	8.35
Indahag	1,405.39	Barangay 34	4.06
Lapasan	227.26	Barangay 35	7.51
Macabalan	45.15	Barangay 36	6.70
Macasandig	397.58	Barangay 37	2.79
Nazareth	68.31	Barangay 38	3.74
Puerto	887.99	Barangay 39	2.32
Puntod	164.90	Barangay 40	13.61

Source: Socio-Economic Profile of Cagayan de Oro City, 2010

B. Political Subdivision

There had been changes in the political subdivision of the city. Cagayan de Oro is divided into two districts by Republic Act 9371. The first district comprises the 24 barangays; barangays Baikingon, Besigan, Bonbon, Bulua, Canitoan, Carmen, Dansolihon, Iponan, Kauswagan, Lumbia, Mambuaya, Pagalungan, Pagatpat, Patag, Pigsag-an, San Simon, Taglimao, Tagpangi, Tignapoloan, Tuburan, and Tumpagon while the second district are barangays; Agusan, Balubal, Bugo, Camaman-an, Consolacion, Cugman, F.S. Catanico, Gusa, Indahag, Lapasan, Macabalan, Macasandig, Nazareth, Puerto, Puntod, Tablon, and all Poblacion Barangays 1-40.

C. Topography and Slope

Cagayan de Oro City is characterized by a narrow coastal plain along the Macajalar Bay and by highland areas separated by steep inclined escarpment. The lowland is relatively flat and its elevation is not more than 10 meters above the mean sea level.

The highlands bound the City in the south from east to west, which consist of plateaus, terraces and gorges.

Creeks and rivers traverse and drain to Macajalar Bay. There are seven rivers, namely: Cagayan River, Iponan River, Bigaan River, Cugman River, Umalag River, Agusan River and Alae River. The more notable creeks are Binono-an, Bitan-ag, Indulong, Kolambog, Sapong, and Umalag.

About 13,587 hectares or 28 percent of the City's land area have a slope between 0 to 8 percent, which is appropriate for most land uses. Such areas are concentrated on the narrow coastal plain, the flood plain areas of the Cagayan and Iponan Rivers, and in the upland terraces. The remaining 72 percent of the land have slopes that are greater than eight percent which pose a challenge to development.

D. Geology

D.1 Geomorphological

Cagayan de Oro can be classified into three broad landforms: lowlands; level uplands; and hills/mountains. The lowlands contain five distinct forms, namely:

- Sandbars. These are narrow, elongated strips of sand deposits formed by wave action on some sections of the coastline. The extent is insignificant.
- Tidal Flats. These are low coastal areas, subjected to tidal influence found mainly between the mouths of Cagayan River and Iponan River.
- Coastal Alluvial Plain. This is the narrow strip of level area from Puerto in the southeast to the center of the city.
- Broad Alluvial Plain. This is found in a limited patch around a small hill south of the City.
- River Flood Plain. The Iponan and Cagayan Rivers formed as extensive flood plain that coalesced north of the Cagayan-Iligan Highway. Such areas may be subjected to brief flooding during extraordinary rainfall events.

The uplands are classified into three forms:

- Terrace or Plateau. There are three distinct plateaus that exist within the city limits. The most extensive one occupies the southeastern region. Another plateau is situated west of Cagayan River along the road to Lumbia, and Talakag of Bukidnon. The third is in the south-central region just north of Barangay Indahag.
- Piedmont. This is an extensive upland area located along the road to Barangay Indahag and along the road to Malaybalay, Bukidnon.
- Canyon/Gorge. These are the almost vertical walls along the very deeply incised river channels. The width of the canyon/gorges ranges from 500 to 1000 meters.

The hills/mountains take five different forms, as follows:

- Escarpment. This is the steep slope separating the lowland plains from the hilly areas. In some sections, the slope is almost vertical.
- Conglomerate Hill. Immediately above the escarpment area is a formation of conglomerate hills.
- Limestone Hill. South of Lumbia is an extensive rolling hills made up of limestone. A smaller limestone area is located on the right side of Bigaan River.
- Shale/Sandstone Hill. West of the Lumbia Airport is another sedimentary formation of shale/sandstone hills.
- Volcanic Hill or Mountain. On the farthest end of the City along the Misamis Oriental - Bukidnon boundary are rugged and steep hills and mountains of volcanic origin.

E. Soil Types

Cagayan de Oro soils are predominantly clayey. Other soil structures are sand, sulfaquent, loam, and clayey loam.

Soils which are good for agricultural production are San Manuel Loam and Bantog Clay.

The Matima Clay and Umingan Clay Loam are of lesser quality for agricultural production. Other soil types which do not have any agricultural value are hydrosol, beach sand and stony clay. Some of these soils are in rough mountain regions not suitable for exploitation; others are in lowland which is suitable for resort and urban-related uses.

F. Climate and Rainfall

Cagayan de Oro City's climate falls under Type III and IV of the Coronas Climate Classification System of PAGASA. The western portion of Cagayan de Oro is classified under Type III which is characterized by a short dry season, usually from February to April, and Type IV climate in the eastern part of the City, characterized by an almost evenly distributed rainfall during the whole year.

PAG-ASA records show that the average yearly total of rainfall is 1,806 millimeters. The average wind that ran in the city was registered at 002 meter per second in January until September and 001 meter per second for the month of August, October, November and December 2010. The coldest temperature in the city is at 18 degrees Celsius and was experienced in February. The hottest month which registered a temperature of 36.3 degrees Celsius was in May 2010.

Figure 2.1
Topographic Map
Cagayan de Oro City

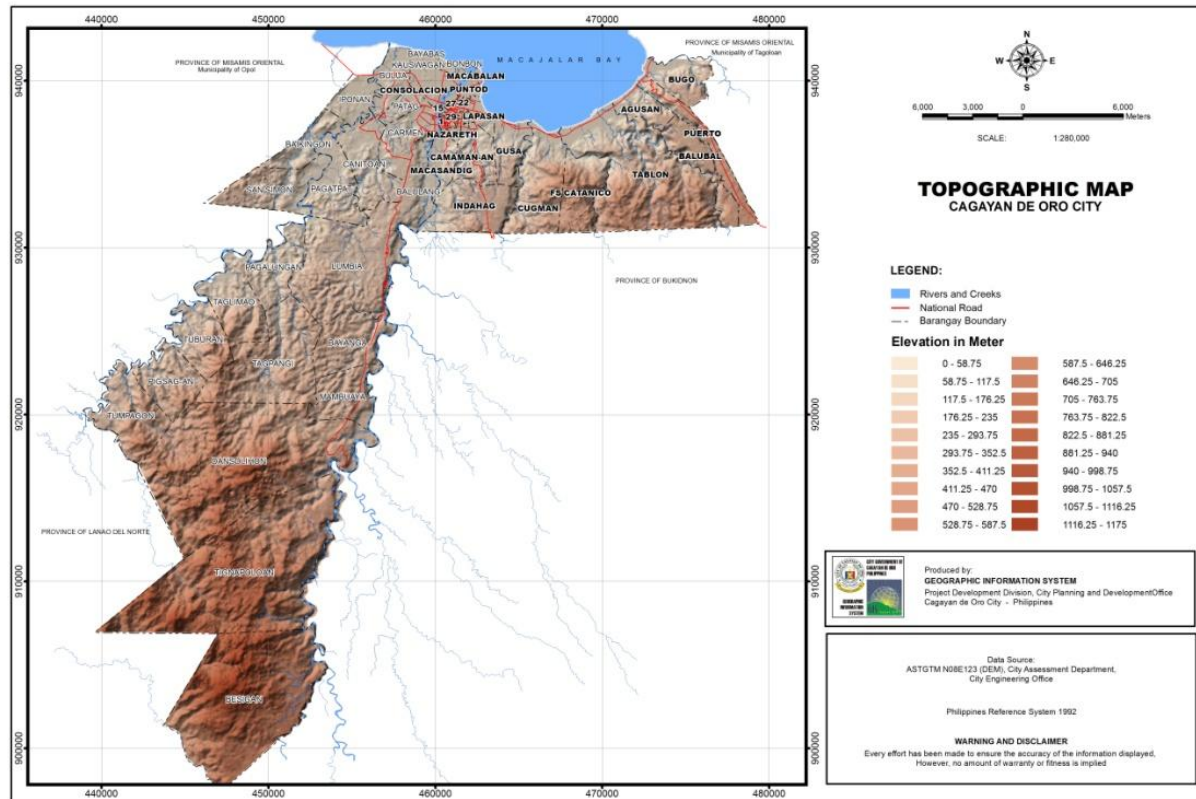


Figure 2.2
Slope Map
Cagayan de Oro City

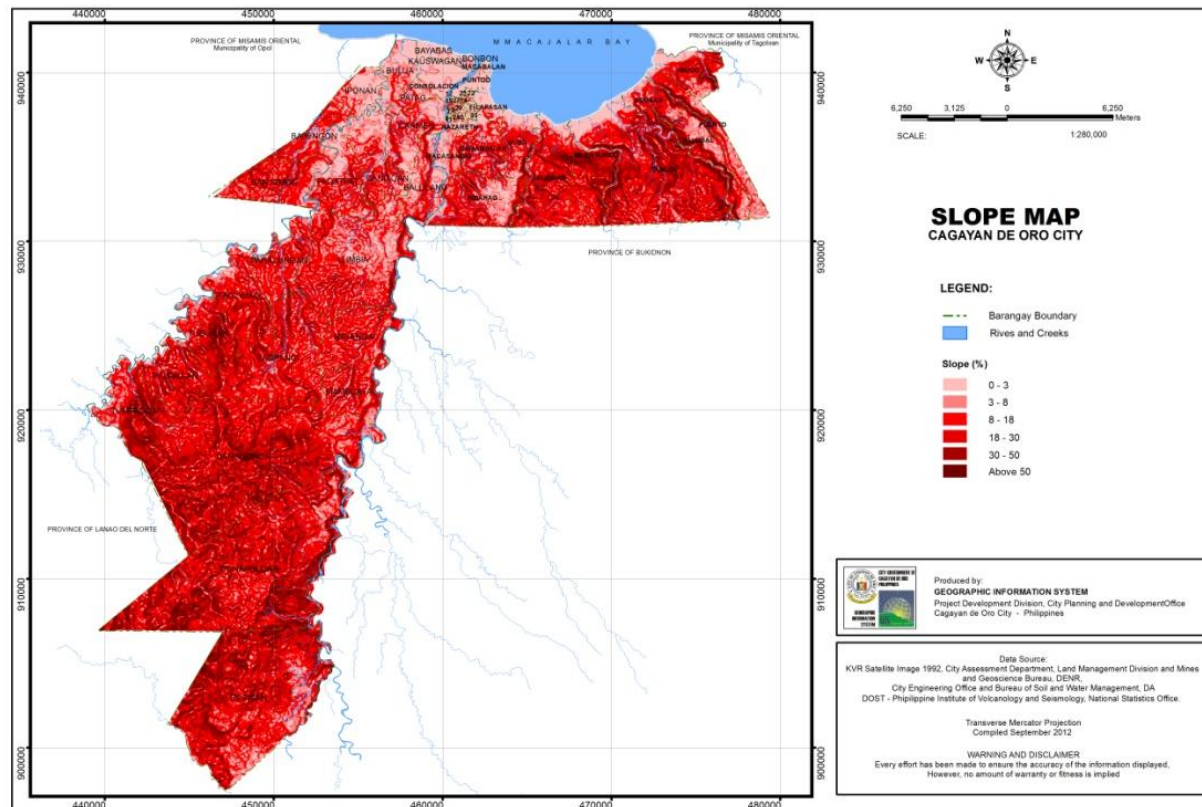


Figure 2.3
Geologic Map
Cagayan de Oro City

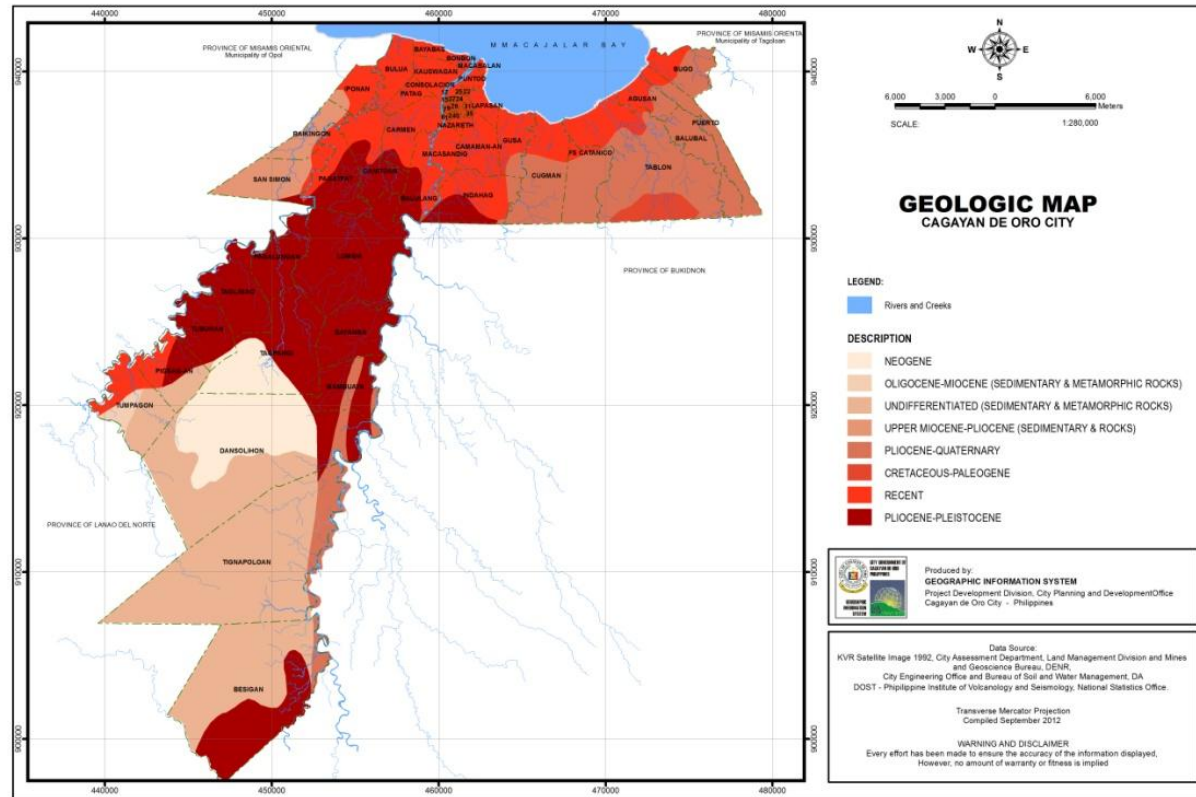


Figure 2.4
Soil Map
Cagayan de Oro City

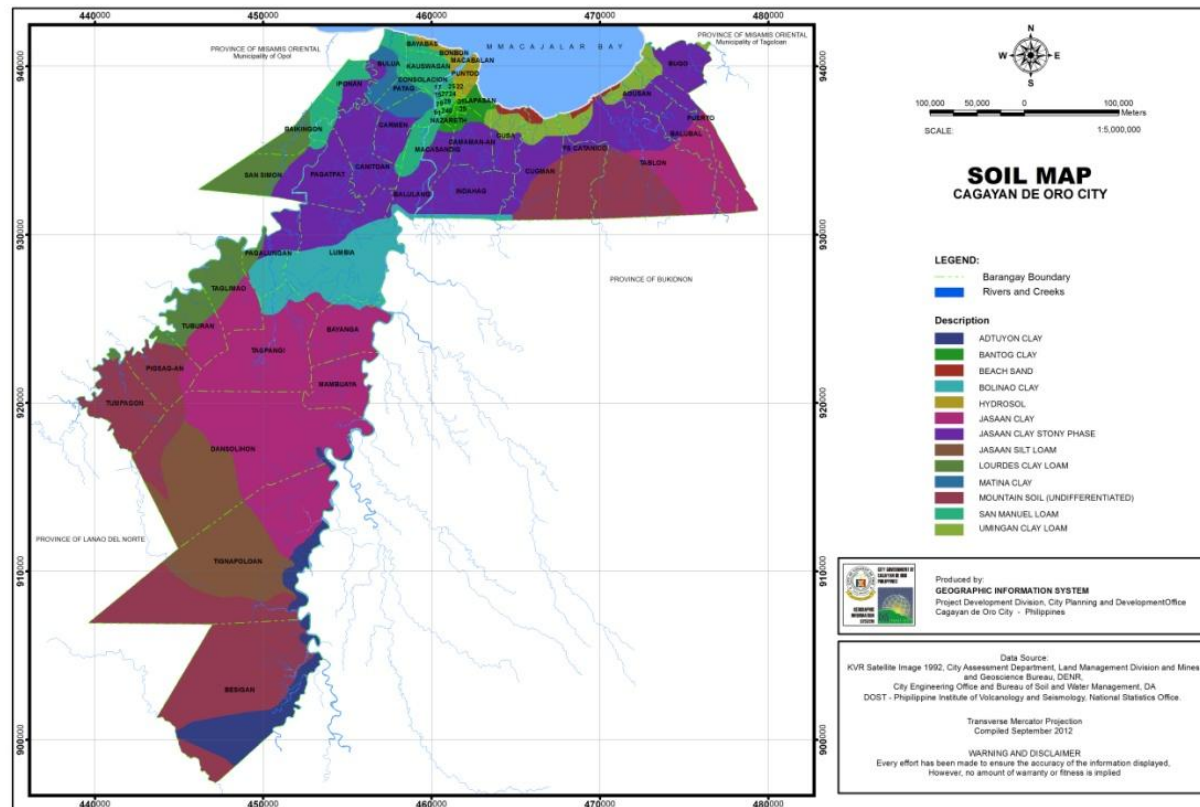


Figure 2.5
Erosion Map
Cagayan de Oro City

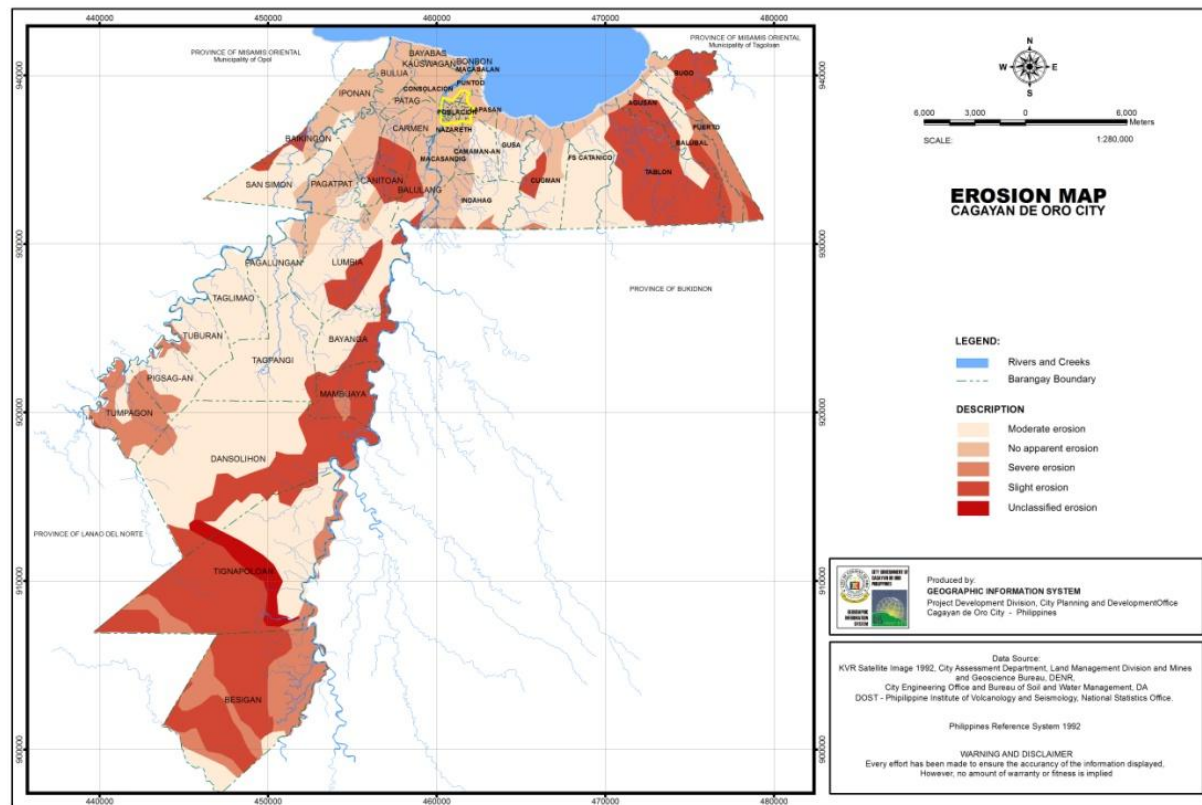


Figure 2.6
Minerals Map
Cagayan de Oro City

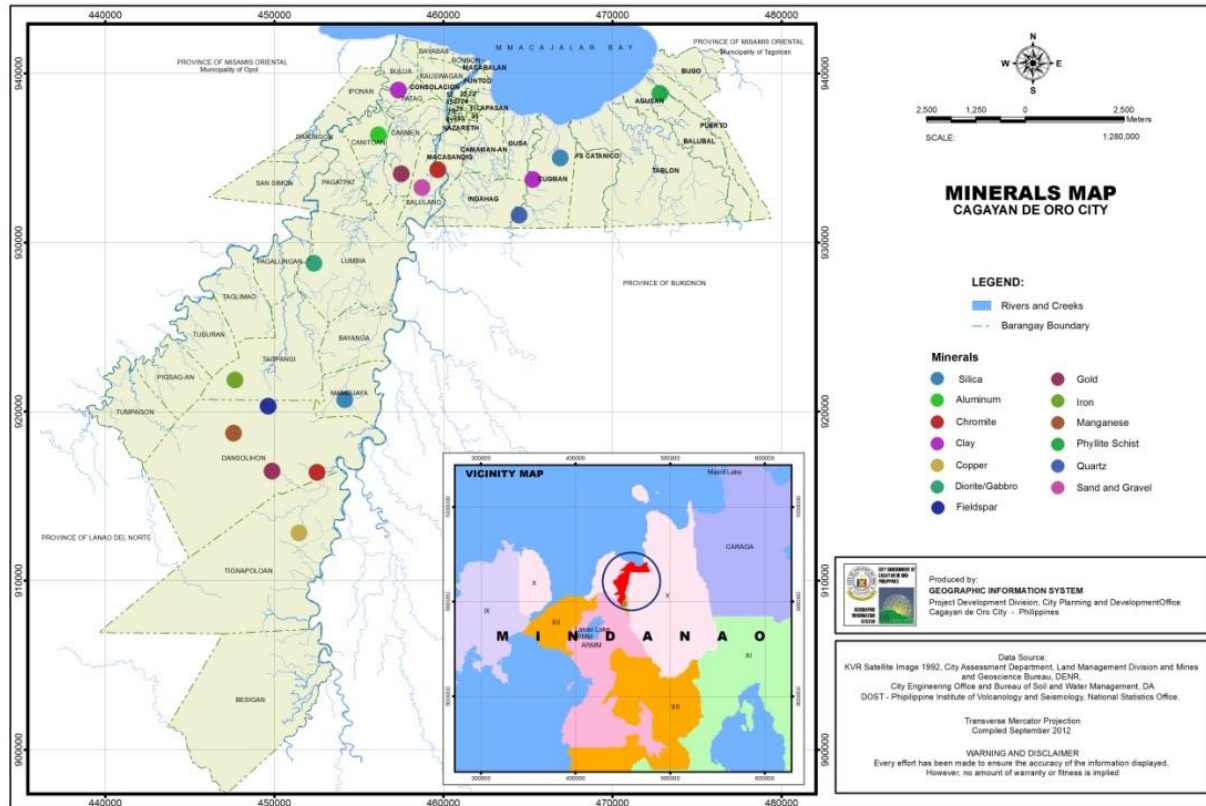


Figure 2.7
Groundwater Map
Cagayan de Oro City

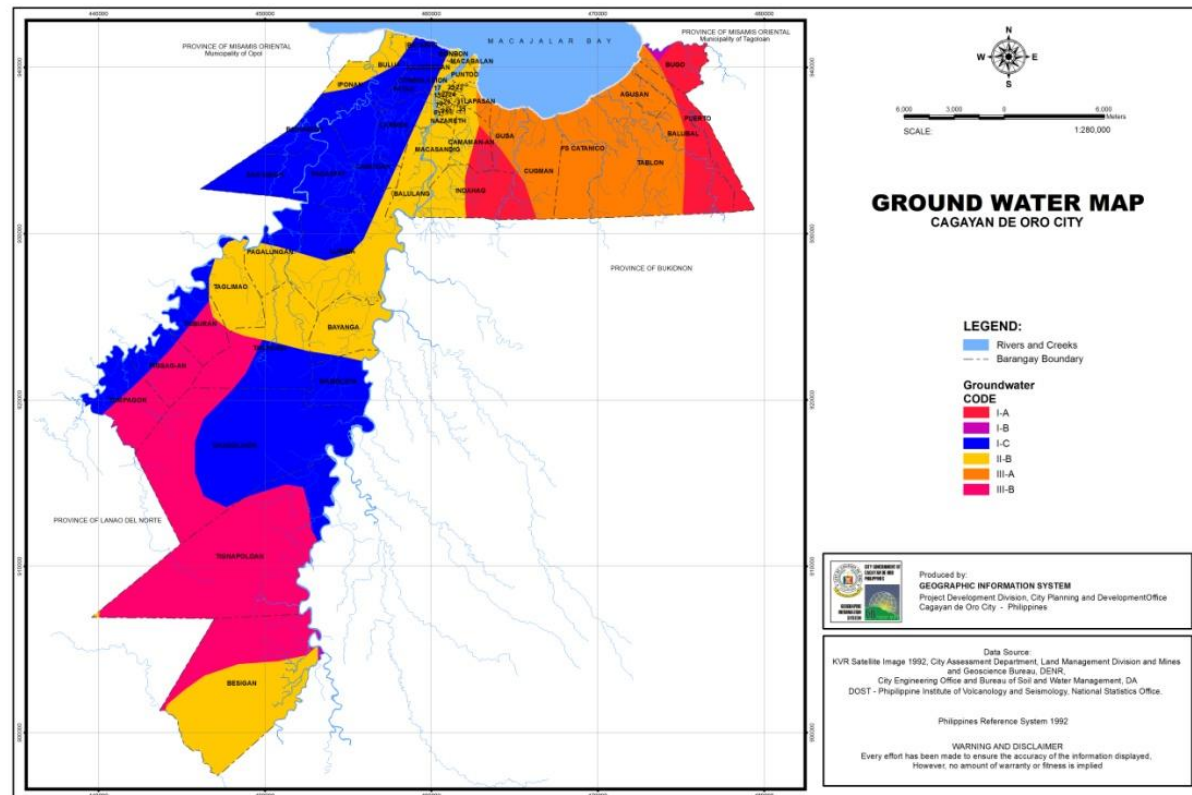


Figure 2.8
Climate Map
Cagayan de Oro City

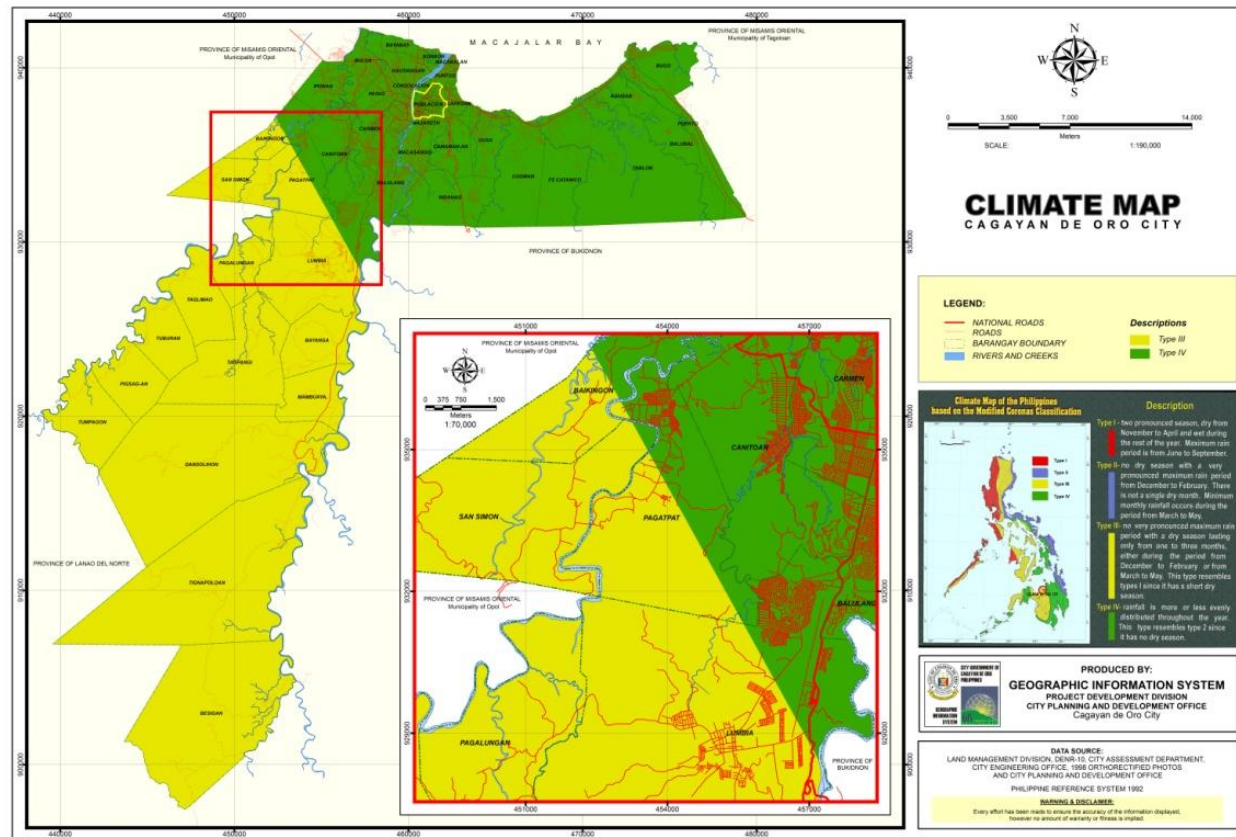
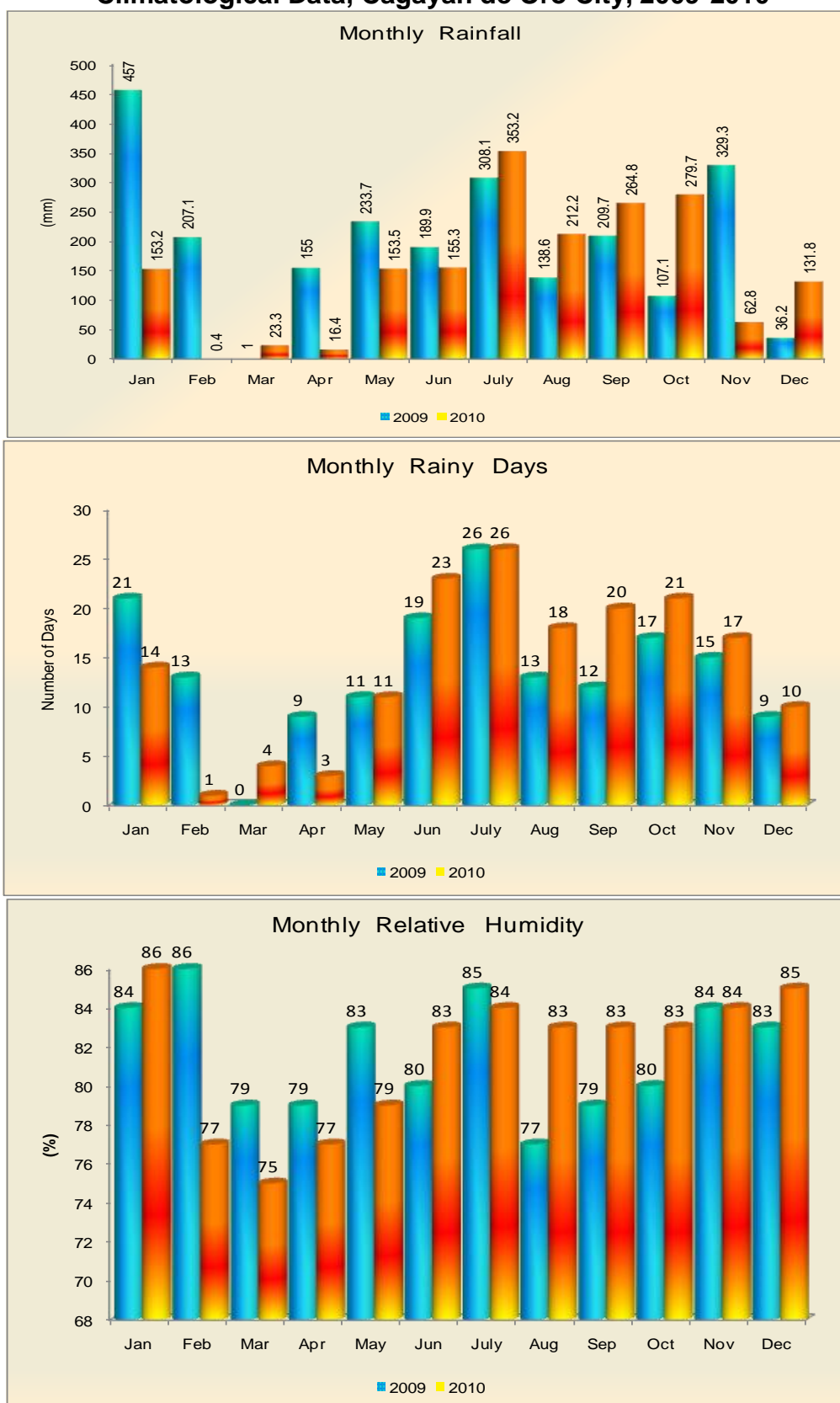


Figure 2.9
Climatological Data, Cagayan de Oro City, 2009-2010



Source: PAGASA

Table 2.2
Monthly Temperature, Cagayan de Oro City, 2009–2010

Month	Temperature (degree Celsius)					
	Minimum		Maximum		Extreme Temperature Mean	
	2009	2010	2009	2010	2009	2010
January	21.8	20.0	32.0	32.0	29.0	29.5
February	21.0	18.0	32.4	35.5	30.1	31.5
March	19.6	19.5	33.2	35.2	32.2	33.2
April	20.4	21.0	35.5	36.2	33.4	33.7
May	21.4	21.4	35.4	36.3	33.1	34.1
June	21.2	22.5	38.4	35.2	33.1	33.2
July	21.4	22.0	35.0	34.4	31.9	32.0
August	20.8	21.4	36.6	35.0	31.6	32.2
September	21.6	21.0	36.6	33.4	33.4	32.2
October	21.6	21.5	34.8	34.0	32.0	32.0
November	20.0	21.5	33.0	34.0	30.4	31.9
December	19.0	21.4	31.5	33.0	30.1	31.5

Source: PAGASA

Table 2.3
Monthly Wind Velocity, Cagayan de Oro City, 2009 – 2010

Month	Wind Velocity (meter per second/degree)			
	Average		Maximum	
	2009	2010	2009	2010
January	001 / 360	001 / 360	010 / 360	010 / 360
February	001 / 360	001 / 360	006 / 360	008 / 330
March	001 / 360	001 / 360	006 / 360	010 / 360
April	001 / 360	001 / 360	007 / 360	008 / 360
May	001 / 220	001 / 360	008 / 270	015 / 160
June	001 / 220	001 / 360	009 / 220	-/-
July	001 / 220	001 / 360	012 / 270	009 / 220
August	001 / 220	001 / 220	014 / 220	009 / 240
September	001 / 220	001 / 220	015 / 360	010 / 270
October	001 / 220	001 / 220	013 / 220	-/-
November	001 / 180	001 / 220	009 / 240	-/-
December	001 / 360	001 / 220	008 / 300	-/-

Source: PAGASA

G. Land Classification

Of the City's total land area of 57,851 hectares, around 48 percent are Alienable and Disposable (A&D) lands, while 52 percent are classified as forestlands. Forestlands are classified further into production and protection forests.

Mining areas in Cagayan de Oro are mostly located in the upland barangays. For Copper and Iron Ore, the mining areas are in the Barangays of Dansolihon, Tablon, Pigsag-an, Pagalungan, Tumpagon, Cugman and F.S. Catanico, while Phyllite Schist can be found in Barangays Tablon, Cugman, and FS Catanico. Quarrying of sand and gravel are in Barangays Balulang, Bulua, Consolacion, Pagalungan, Taglimao, Pagatpat, Pigsag-an, San Simon, Agusan, Barangay 17, Canitoan, Gusa, Indahag, Iponan, Kauswagan, Macasandig, Tuburan, and Tumpagon. For limestone, these are in Barangays Bulua, Dansolihon, Baikingon, Balulang, Bulua, Camaman-an, Canitoan, Gusa, Carmen, Indahag, Iponan and Lapasan.

H. Protection Areas

Protection forest covers a total area of 4,257 hectares of the total forestland and are located in Barangays Cugman, Lumbia, Tagpangi, Taglimao, Tuburan, Pigsag-an, Tumpagon and Dansolihon. These areas are 1,000 meters above sea level, having 50 percent and above slope, wilderness areas and 20 meters both sides of the river.

Coastal and Marine Areas

The total coastline length of the City is 25 kilometers from east to west. From this coastline, the potential area for mangrove and wetland development is approximately 21 kilometers. There are 11 coastal barangays, namely: Barangays Puerto, Bugo, Agusan, Tablon, Gusa, Cugman, Lapasan, Macabalan, Bonbon, Bayabas and Bulua.

- **Mangroves, marshes and swamps** are areas containing brackish waters in tidal flats. These areas which are found along the seacoast and the lower river basins of the city sustain important ecosystems. Cagayan de Oro has limited area of this type of ecosystem which is mostly located at the river deltas, particularly at Barangays Bonbon and Kauswagan. Several patches are also found in Barangays Bayabas and Bulua.

Mangroves, marshes and swamps play a pivotal role in the sustainability of the city's forest ecosystem and climate change adaptability.

1. Purifies the adjacent aquatic environment (aeration capacity);

2. Stabilizes and protecting the shorelines from tidal surges and strong wind forces;
3. Serves as depository and breeding area for marine wildlife;
4. Improves local thermal environment by lowering ambient temperature, and increasing moisture;
5. Provides natural abatement buffer during floods

Mangroves in the city serve as spawning and breeding grounds of some fish and marine species. The City's mangroves are disappearing due to encroachment by people needing land for the construction of residential houses. To save whatever mangrove area is left, replanting and maintenance of these areas are implemented in Barangays Gusa and Cugman.

- Habitat assessment shows that the overall **coral** cover in three coastal barangays (Lapasan, Gusa and Cugman) assessed is in poor condition of which Live Hard Coral percentage was only 12-16 percent and most are dead corals.
- There were five species of **seagrasses** found in the coastal area of Barangay Bugo, while one species found in Barangays Lapasan and Gusa.
- **Fish sanctuaries** were established covering 14.5 hectares in the Barangays of Puerto, Tablon, Gusa and Lapasan. However, based on the Participatory Coastal Resource Assessment (PCRA) in 2010, the sites were in poor condition as to the status of the coral resources.

Figure 2.10
Land Classification Map
Cagayan de Oro City

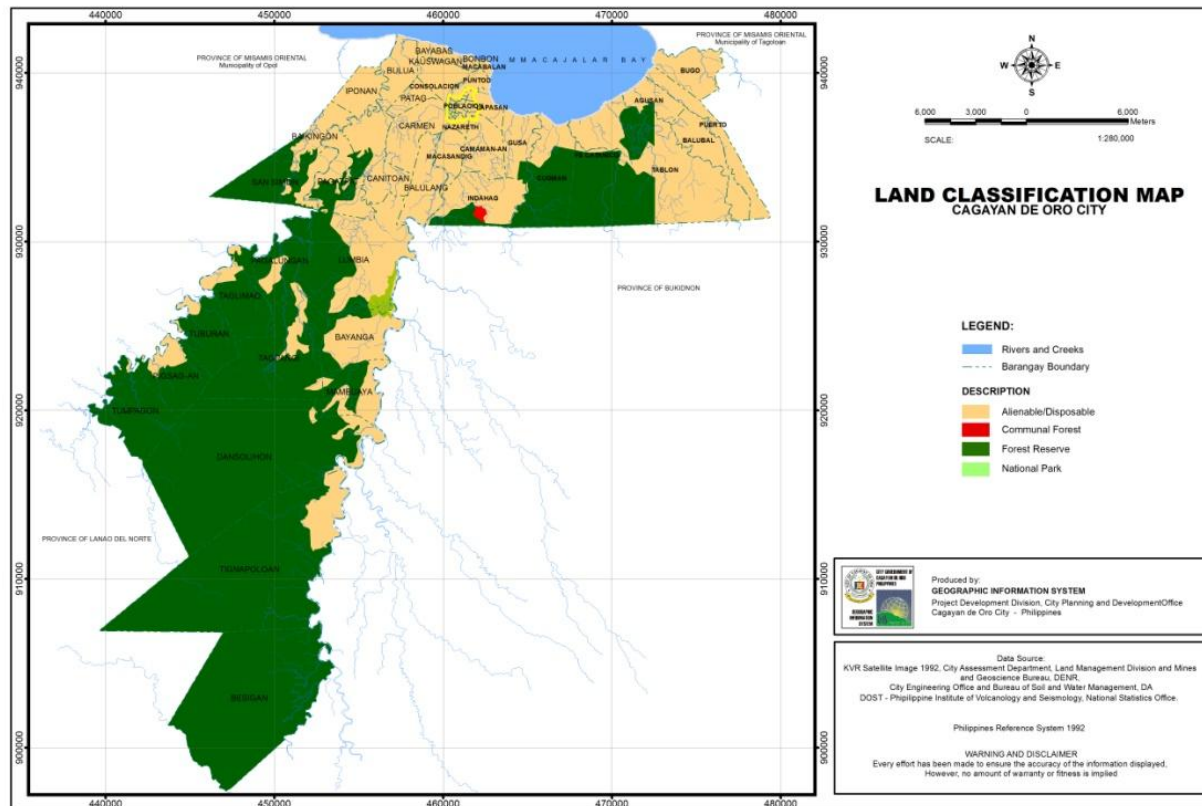


Figure 2.11
Land Cover Map
Cagayan de Oro City

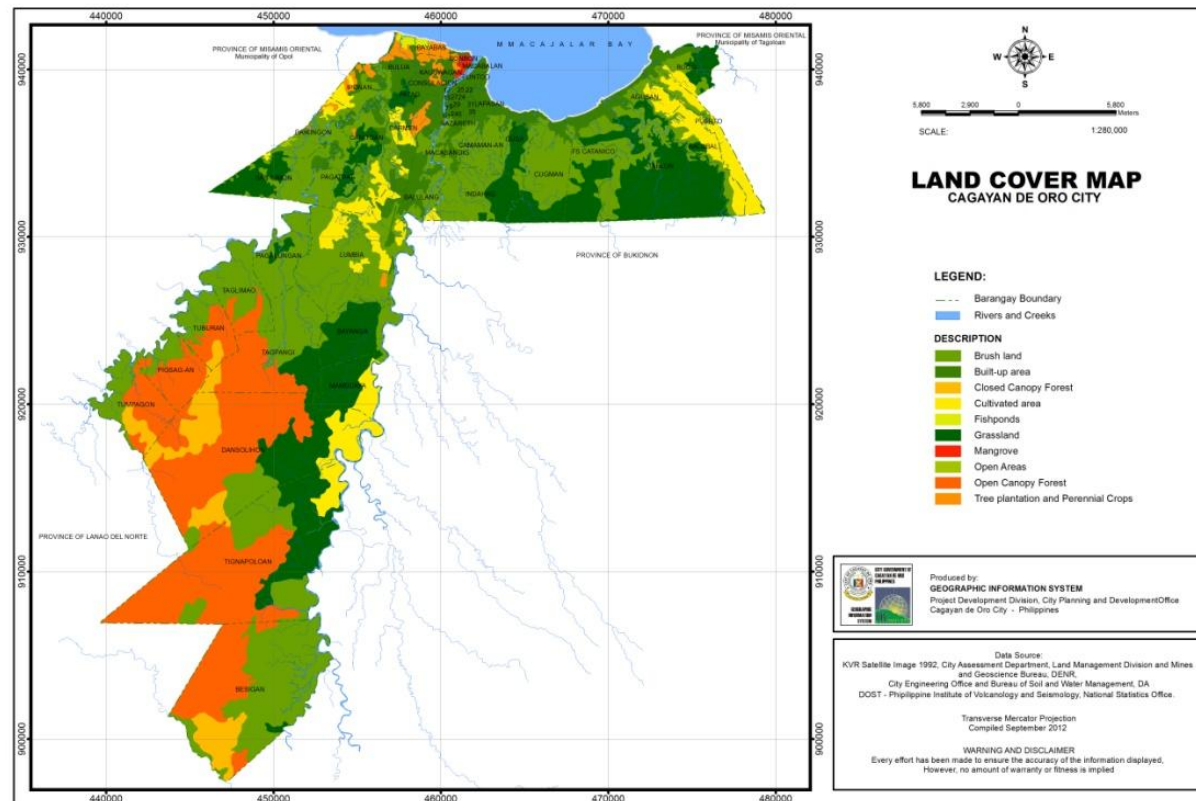
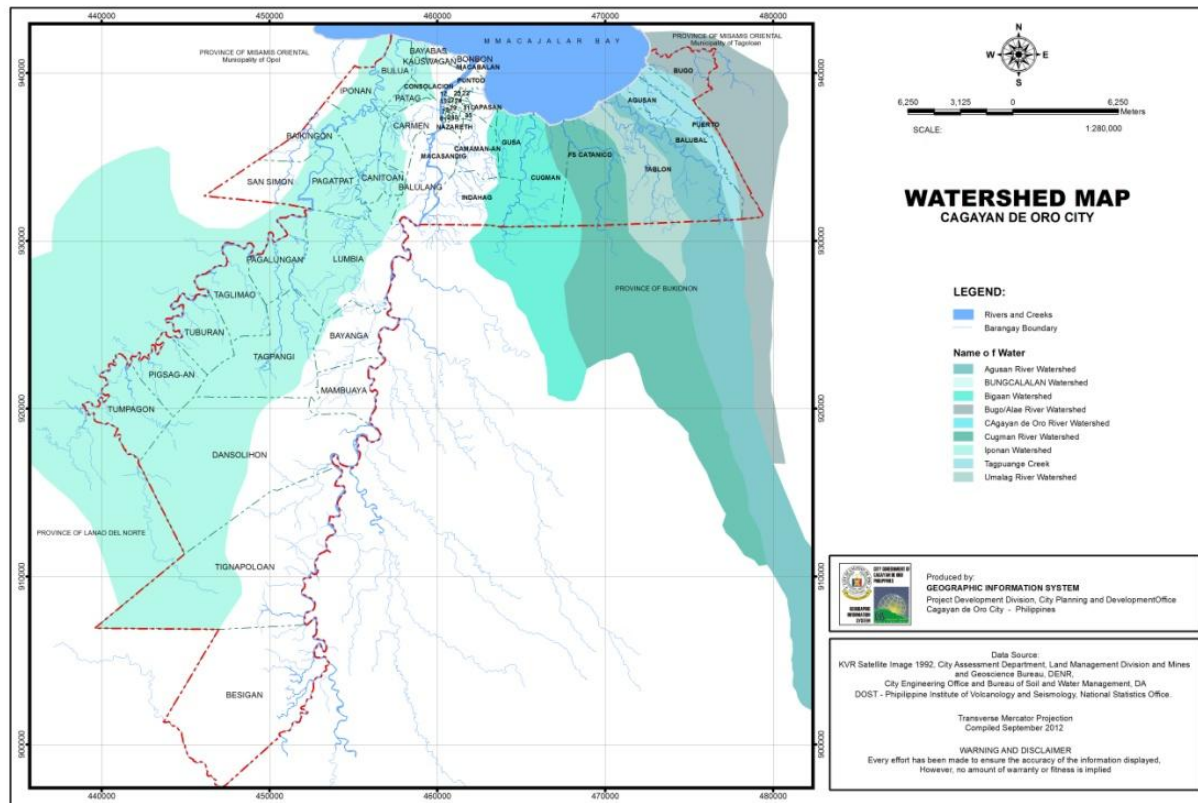


Figure 2.12
Watershed Map
Cagayan de Oro City



Chapter 3

Social Sector

3.1 Housing

From 2000 population of 461,877 as NSO reported, it slowly increased to 553,966 by 2007 and reached 602,088 by 2010. An annual average increase of 2.85% from 2000-2007 and 2.90% from 2007-2010 is noted.

With an average household size of 5 in 2000, total number of households was recorded at 93,525 on the same year, slowly increasing to 116,224 by 2007 and 137,465 by 2010.

If the average annual increase rate of 2.90% is unabated and the average household size is maintained, it is expected that by 2016 the number of households will total to 141,179 and by 2022 it will reach 165,520.

As of 2010, housing backlog summed up to 39,304; 4,406 of which is doubled-up, 24,813 HHs are families in danger/hazardous areas, and others (fire victims), 1,176 HHs are affected by infrastructure projects, 5,457 for demolition/eviction, with pending threats for demolition is 3,452, land owners willing to sell property to occupants 3,209, others (conflict of ownership) is 7,955.

3.1.1 Population Trend

Among the Barangays, Carmen garnered the highest population with 67,583 representing 11% of the city's population. On the other hand, Barangays 39 & 37 registered the lowest with 46 & 77 respectively and both showed a downtrend growth rates. In fact, if the growth rate will remain steady, Barangay 39 will only have a population of 38 and Barangay 37's will further reduced to 12 by 2022.

Majority of barangays within the Poblacion showed a downtrend growth rate while others have a very minimal growth. The rampant conversion of residences into commercial use have attributed to this. However, if the landscape will change, like transforming bungalows or two storey buildings into medium-rise residential buildings and condominium type of residences then the population trend will be reversed. One example is the on-going condotel project of Avida wherein portion of the area will be for residential use. Once completed it will accommodate more families thereby increase population in the area.

Population in far-flung barangays reflected slow growth. Perhaps it is because of lack of economic opportunities and the absence of amenities and social services that the residents are forced to migrate to the city proper.

On the other hand, 10 barangays, 5 from each district, are expected to double their population and 8 barangays, 7 from District 1 & 1 in District 2, will even increase to more than 200% by 2022.

3.1.2 Housing Backlog as of 2010

Survey records showed that as of 2000 the ideal standard household to housing unit ratio of 1:1 was set. Ten years later, survey results indicated that there are 133,366 occupied housing units in Cagayan de Oro for the 137,465 households thereby establishing a ratio of 103 households for every 100 occupied housing units. It means an existence of doubled-up housing and a shortage of housing units occur. To achieve an ideal ratio of a housing unit for each household, a total of 4,099 more housing units are needed. However, unacceptable housing units, those that are made of light materials like cogon, nipa, anahaw, etc which will not last for 5 years and makeshift houses make up for the backlog. Housing backlog totaled to 39,304 (based on Local Shelter Plan)

3.1.3 Effects of Tropical Storm Sendong

With the devastation caused by Tropical Storm Sendong which struck the city in December 16-17, 2011, the scenario has changed. Some places that have long been identified by the DENR as danger areas and therefore not suitable for housing have suddenly been cleared when 4,301 houses were totally washed out and 14,883 partially damaged. Barangay Macasandig was the hardly-hit area with 1,630 structures totally washed-out followed by Balulang with 611 and Barangay 13 with 423 structures totally washed out.

Although the informal settlers were immediately transferred to the various evacuation centers and were supplied basic needs like food and clothing, their longer stay in the centers took a toll on their health especially among young children and older people and for a few, not just on their physical health but as to their mental health as well. Squabble among them has also become a perennial scenario.

The declaration of President Benigno Aquino of some areas as No Build Zone rendered the once heavily inhabited areas as open and uninhabitable. The former occupants in these areas which totaled to 2,740 families either temporarily took refuge on the various evacuation centers or stayed with their relatives.

They will eventually transfer to the resettlement areas owned and developed by the City and Xavier University with the help of the DPWH, DSWD other national government and private/charitable institutions. The National Housing Authority will acquire additional land to accommodate more families. This scenario would cause drastic drop of population in a few barangays and sudden increase in barangays where they will be resettled. Relatively, demand for housing will then take surge by year 2012. In fact, as of the moment, 5 resettlements sites are on-going development and last 27 April 2012, 500 units were already turned over by the City to qualified Sendong

victims led by no less than President Benigno Aquino, Jr. assisted by Vice President & HUDCC Chair, Jejomar Binay.

NO BUILD ZONE*	
BARANGAY	
Macasandig	1. Sitio Calacala 3. Tambo 2. Biasong
Consolacion	3. Isla Baksan 4. Isla Bugnaw
	5. Isla Delta
Barangay 13 & 15	6. Isla De Oro

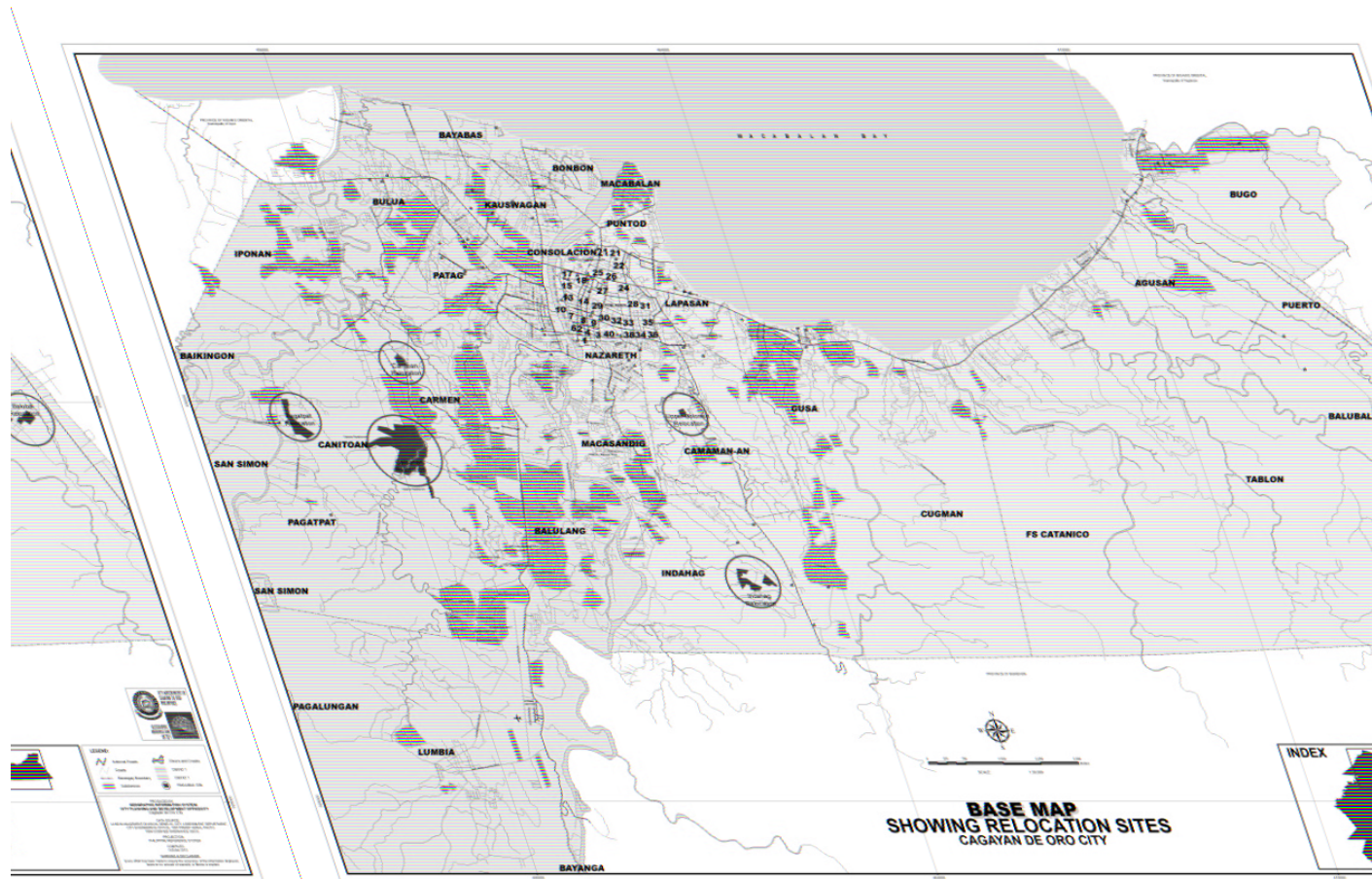
*Per declaration of President Benigno Aquino, Jr.

Most areas which were not directly hit by TS Sendong have indirectly been affected of its ill effects like the cutting off of water supply for a month and the intermittent supply of electricity thereby affecting their way of life especially those whose livelihood are home-based.

As of 2010, 94% of the 120,418 households are connected with water supply system; 97% are already energized; 90% have water-sealed toilets and 70% are already covered by garbage collection system.

2007 NSO survey disclosed that 68,572 or 59% of the 116,224 households owned and/or amortized the lot they occupy, 16% are renters, 18% are occupying the land for free but with owners' consent while 3% occupy the land without the consent of the owners. However, per survey conducted by the LGU, as of 2011, the number of informal settlers totaled to 23,893 families.

Figure 3.1
Map Showing Relocation Sites of Typhoon Sendong Survivors
Cagayan de Oro City



While provision of socialized housing programs is largely dependent on the government, there is really a need to encourage more joint undertaking with the private sector in financing projects. Shelter related issue is difficult to address because of limited funding support, limited participation from the private sector in the socialized housing to the compliance of Section 18 of RA 7279, and the scarcity of affordable residential area. That is why many families are still residing along danger zone/or private properties which is highly vulnerable to flooding and other hazards.

Present needs totaled to 34,898, the biggest bulk of which comprise the homelessness caused by Tropical Storm Sendong, while the rest are those households in danger areas, those affected by infrastructure projects, those with court order for demolition, and with pending threats of demolition/eviction. The formation of new households due to population growth solely covers the future needs specifically covering the period 2012-2022 which totaled to 79,073.

Upgrading needs on the other hand, include the provision of security of tenure since presently these families do not own nor rent the area they occupy so there is always a threat for displacement of people; improvement of the living condition of the occupants thru provision of adequate facilities; intensify livelihood opportunities through livelihood skills training seminars; more acceptable/affordable housing units are needed in such a way that they can withstand from bad weather conditions.

3.1.4 Resources Needed for Housing

A. Land Need for Housing

To address the backlog and future housing needs and granting that each household will need an average of 200 square meters for their housing unit, inclusive of area allocated for roads and open spaces, a total of 5,884,200 square meters or 588.42 hectares suitable for housing should be made available by 2017. An additional 4,868,200 square meters or 486.82 hectares is needed to accommodate projected households for the period 2018-2022.

With the Community Mortgage Program of the Social Housing Finance Corporation, it is envisioned that the City Government will be able to solve the tenure issue of those presently occupying privately-owned lots by negotiating with the lot owners to sell their property to present occupants. However, for those occupying within the danger areas which is estimated to be 71% of those listed under the upgrading category, then an additional 143.36 hectares are needed. This is on the

assumption that each household will be allocated 120 square meters inclusive of area for road network and open spaces.

Moreover, the government should continue to go into land banking, subsidize housing for those who cannot afford and make them transparent, adopt a policy on an annual target on housing the poor, go into medium rise building but bigger floor area, and declare highly dangerous zones as no build zone/non-habitable zone and strictly enforce it.

B. Infrastructure Need for Housing

Additional housing comes with increased need for utilities and infrastructure like potable water, power supply, sewerage facilities, road network, etc.

The water supply of Cagayan de Oro is exclusively distributed by the Cagayan de Oro Water District (COWD). Unfortunately, Tropical Storm Sendong wreaked havoc on their facilities that they invested huge financial resources to rehabilitate them. In fact, the just turned-over units to Sendong victims in resettlement area in Calaanan are not yet individually connected with potable water. Instead, they have to share the communal facility and for that, the LGU has committed to pay for the water bills until such time that the individual connections will be done.

According to the COWD manager, about PhP20 million is needed to install the distribution lines in Calaanan alone. With more resettlement projects on-going, more funds are needed.

With this scenario we can foresee the need of the COWD to adapt strategies which can help them cope with their financial challenges otherwise the percentage of households unserved by potable water will increase.

There is also a need to develop more road network to accommodate additional vehicles and traffic volume. Parking spaces should also be taken into consideration. The allocation of lanes for pedestrians, motorcycles and bicycles will not only ease the traffic but will also lessen the road accidents.

For the power supply it would be best for the LGU to coordinate with power suppliers and distributors so as to ensure enough supply.

Sufficient and efficient sewerage system should likewise be put in place to avoid flooding and prevent Sendong-like tragedy.

C. Finance Requirements for Housing

Owning a house is considered one of the biggest investments a family can make. Apparently, this is the reason it has become elusive to many especially those belonging to the poor segment of the society. The cost of a family's housing will highly depend on their affordability and the willingness to pay for it. Generally, as the family's income increases, the allocation for the acquisition of housing also increases percentage wise. For instance, families with income between 10,000-15,000 will only allocate 10-15% of their income for housing while families with income of 50,000 and above will allocate up to 40% of their income for housing.

For purpose of estimating the financial requirements to meet the housing needs of the city's populace, a conservative average of P400,000 per unit will be used. With the estimated 41,367* houses needed for the period 2012-2017 and granting that the need will be equally spread every year, a whopping PhP2.76 billion will be needed each year for the next 6 years or a total P16.56 billion. Another PhP21.78 billion will be needed to address the estimated housing need of 36,288** units for the period 2018-2022 assuming that the acquisition cost of the house and lot will increase and will be pegged at P600,000.each.

**covers backlog-12,473 units; due to population for period 2012-2017-6,948 and 50% of the insecure tenure-11,946*

***covers need due to population growth for the period 2018-2022- 24,341 and 50% of the unsecured tenure-11,947*

Figure 3.2
Population and Number of Household for the last three censal years
2000, 2007, 2010
Cagayan de Oro City

Figure 3.3
Population vs. Household, 2010-2022
Cagayan de Oro City

Table 3.1
Population Trend By Barangay, 2010
Cagayan de Oro City

District	Total Population 2010	No. of Brgys	No. of Brgys with over 100% increase in Population	No. of Brgys with 200-500% increase in Population	No. of Brgys with minimal growth	No. of Brgys with downtrend population
1	290,913	24	5	7	9	3
2	311,175	56	5	1	20	30
List of Barangays						
District 1		Balulang Canitoan Carmen Dansolihon Tuburan	Bayabas Besigan Iponan Lumbia Mambuaya Pagatpat Tumpagon	Baikingon Bayanga Bonbon Bulua Kauswagan Pigsag-an San Simon Taglimao Tignapoloan	Pagalungan Patag Tagpangi	
District 2		Gusa Puerto Brgy 15 Brgy 28 Brgy 40	Indahag	Agusan Balubal Bugo Camaman-an Consolacion Cugman F. S. Catanico Lapasan Macabalan Macasandig Puntod	Nazareth Brgys 1-4 Brgys 6-14 Brgys 16 Brgys 18-23 Brgys 26-27 Brgys 29 Brgys 31 Brgys 33 Brgys 36-39	

			Tablon Brgys 5,17,24, 25,30, 32,34,35	
--	--	--	---	--

Source: National Statistics Office (NSO)

Figure 3.4
Population Growth Rate, 2010
Cagayan de Oro City

Source: National Statistics Office (NSO)

Table 3.2
Housing Situation for the Last Two Censal years, 2007 and 2010
Cagayan de Oro City

	Year 2007		Year 2010	
	No.	% Increase Decrease	No.	% Increase Decrease
Households (HH)	116,224	24.27	137,465	
Household Population	553,966	20.47	598,803	
Housing Unit (HU)				
Occupied HU	113,321	24.71	133,366	
Vacant HU				
Ratio of HH to Occupied HU			103:100	
Ratio of HH Population to Occupied HU			103:100	

Source: Source: National Statistics Office (NSO)

Table 3.3
Housing Backlog, 2010
Cagayan de Oro City

Backlog	Number of Units	% to total
Doubled-Up Households	4,406	40.30
Unacceptable Housing Units	5,621	51.40
Makeshift/Salvage/Improvised Housing Units	907	8.3
TOTAL	10,937	100

Source: Source: National Statistics Office (NSO)

Figure 3.5
Housing and Utilities, 2010
Cagayan de Oro City

Source: City Health Office

Figure 3.6
Tenure Status, 2010
Cagayan de Oro City

Table 3.4
Current and Projected Needs for Housing
Cagayan de Oro City

A. Present Needs			
Backlog			
a. Doubled-Up			4,406
b. Displaced			34,898
Total Present Needs			39,304
B. Future Needs			
Due to Population Growth	2014-2016		12,216
	2017-2019		13,227
	2020-2022		14,326
Total Present and Future Needs			39,769
C. Upgrading Needs			
1. Tenure			248

2. Infrastructure Improvement	
a. Without electricity	358
b. Without adequate potable water	89
c. Without adequate sanitation	3,009
3. Structural Improvement	
a. Houses made of light materials	5,790

*2011-2017 housing needs due to population growth less 2011 housing accomplishments 20,761-3,813=16,948)

**Source: CDO Survey

Table 3.5
Resettlement Housing Project for Typhoon Sendong Victims,
as of 2nd Quarter of 2012
Cagayan de Oro City

	Barangay	Land Owner ship	Area (has)	No. of Families	No. of Lots Generated	Utilities/ Facilities/ Amenities	Adminis- tration
Calaanan Phase 2B	Canitoan	LGU	16.9101	-	1,517	Lighting	LGU
Calaanan Phase 3	Canitoan	LGU	13.9826	380	1,460	Lighting/water	LGU
Tan/Ramos donated for Typhoon Sendong Victims	Canitoan		2.3000	-	309	-	LGU
LGU/Habitat for Typhoon Sendong Victims	Canitoan	LGU	2.7346	-	444	Lighting	LGU
Berjaya GK Village	Camaman-an	LGU	1.7543	-	208	Lighting	LGU
Indahag Relocation Phase I	Indahag	LGU	3.2846	200	495	Lighting	LGU
Indahag Relocation Phase 2	Indahag	LGU	8.6171	-	1,127	-	LGU
Total			49.5833	580	5,560		

Source: National Housing Authority/Estate Management Division, CPDO

Table 3.6
Technical Findings on Housing

Technical Findings/Observations	Implications (Effects)	Policy Options/Interventions
Some families are still residing along danger area and/or private properties	Highly vulnerable to flooding. Loss of lives and properties which can be costly.	Promote Community Mortgage Program. Declare highly dangerous as No Build Zone and strictly enforce it. Give primary consideration to upgrading informal settlement. Priority in-city-relocation. LGU to allocate from their budget subsidy for housing and its utilization should be transparent. Employ mitigating measures to protect environmentally critical areas such as riverbanks etc. Knocked down old houses and build medium rise building with complete amenities and neighborhood center.
The private sector has limited their participation in the socialized housing to compliance of Section	The provision of socialized housing is largely dependent on government. Limited funds to	LGU to identify more incentives to those who will participate/engage in socialized housing. Promote joint undertaking with the private sector in financing projects.

CLUP Volume 3 – The Sectoral Studies

18 of RA 7279	support housing demand.	
Limited funding to provide housing demand for the urban poor.	Difficulty to address the housing demand. Many dwell in danger zones (roads, under the bridges, salvage zones, etc.) Many street family dwellers	National government to increase funds for the housing program especially for the poor families. Subsidize housing for those who cannot afford and make them transparent. Implementation of Sec. 43 of UDHA on Socialized Housing Tax. Adopt a policy on an annual target on housing the poor.
Scarcity of affordable residential area	Informal settlement/ encroachment to private properties Doubled up housing Poor housing condition	LGU to review and update their CLUP and identify and rezone more lands for residential use. LGU continue to go into land banking. National government to increase budget for housing. Medium rise building but with bigger floor area.
Unavailability of complete data base on housing	Unmet needs on housing	Design schemes based on affordability where the homeless can choose from. Advocate to NSO the inclusion of more relevant housing data in their regular survey.
No Build Zone	Reduction of residential area	Passage of Ordinance Re: No Build Zone Area
	Reduce Risk	Convert the area into eco-tourism park
		Just compensation/land swapping
		Declare all accretion area as No Build Zone Area
		Convert accretion into productive use
		Dredging Project of CdeO river/river control
Residential area used as commercial area	Congested area No parking area	Allocate commercial strip in every subdivision

3.2 Health

3.2.1 Situational Analysis

Live births in the city in 2011 numbered 14,485 or a crude birth rate of 23.4%. This translated to 1207 babies born each month, 40 babies born per day, or almost 2 births per hour. There was a very slight decrease in the rate from previous year, which was 24.5%.

There were 5,149 or 8.33% people die this year in the city. This indicate to 429 persons died per month or 14 persons died per day.

There are 53 Barangay Health Centers (BHC) of the City (See Annex Table 6, p.271). Thirteen (13) medical officers are responsible for implementing public health programs. Each medical officer supervises and rotates to at least 3 assigned BHCs or more. There are 37 nurses. Most of them are assigned to one BHC. But there are 8 nurses assigned to two or more BHC with small population coverage. There are 66 midwives. Most of them are assigned to one BHC. Some health centers with larger population have 2 or 3 midwives. There are 6 dentists, 21 sanitary inspectors and 10 medical technologists distributed to four districts of the city, serving several BHCs.

The BHC generally deliver the same package of health services like Maternal and Child Health, Disease- Free Zone Initiatives, Intensified Disease Prevention and Control, Healthy Lifestyle and Health Risk Management, Environmental Sanitation, and Health Advocacy and Promotion. All BHCs are OPB accredited. Though all BHCs are functioning as lying-in clinics and implementing TB sputum examinations through its designated microscopy center, they are still awaiting for their Philhealth accreditation on MCP and TB-DOTS.

On the other hand, the City Health Office (CHO) serves as the main headquarter where it houses the medico-legal services, issuance of health permits, animal bite treatment center, social hygiene clinic, and administerial functions. The achievement of various health programs by the CHO depends on the support they receive from their Local Chief Executive (LCE).

The curative health delivery system is provided by the 14 hospitals, 3 of which are government and 11 private hospitals. One government hospital is operating as level 4, Northern Mindanao Medical Center (DOH retained hospital which caters to the constituents of the city and Region X) while the two other government hospitals are operating as level 2, namely JR Borja General Hospital and Camp Evangelista Station Hospital (military hospital which caters mostly to military personnel and their dependents). Of the private hospitals, Maria Reyna Hospital is operating as a level 4 category hospital while 5 of the private hospitals namely Madonna and Child Hospital,

Polymedic Medical Plaza, Capitol University Medical City, Polymedic General Hospital and Cagayan de Oro Medical Center are operating as level 3 hospitals. Puerto Community Hospital and Sabal Hospital Inc. are level 2 private hospitals while Del Monte – Bugo operates as a level 1 private hospital.

In Cagayan de Oro, there are four (4) districts attending the health care delivery system (Table 3.13). In the West, there are four (4) hospitals namely; JR. Borja General Hospital, Madonna and Child Hospital, Camp Evangelista Station Hospital and Polymedic Medical Plaza. In the East, there are also four (4) hospitals namely Ma Reyna Hospital, Capitol University Medical City, Del Monte Hospital – Bugo, and Puerto Community Hospital. Lastly, there are six (6) hospitals comprising the central district namely, Northern Mindanao Medical Center, Polymedic General Hospital, Sabal Hospital Inc., Cagayan de Oro Medical Center, CDO Maternity Children's Hospital and Puericulture Center. The fourth district is High Land District which doesn't have any hospital.

For the year 2011, all government and private hospitals in the various districts of Cagayan de Oro City were able to meet the minimum licensing requirements of the Department of Health and all are also accredited with PhilHealth.

From the 14 Hospitals of the Four Districts excluding NMMC (DOH retained hospital) and Camp Evangelista Station Hospital (Military Hospital), there are a total number of 1,805 beds. Based on the 2011 Cagayan de Oro City Population projection which is 618,263, there is a ratio of 1 bed per 461 constituents.

Table 3.7
List of Hospitals in Cagayan de Oro City, 2010

Health District	Hospital	Type	No. of Beds	Category
West	JR Borja General Hospital	Government	123	Level 2
	Madonna and Child Hospital	Private	177	Level 3
	Camp Evangelista Station Hospital	Government (Military Hospital)	79	Level 2
East	Polymedic Medical Plaza	Private	185	Level 3
	Ma. Reyna Hospital	Private	115	Level 4
	Capitol University Medical City	Private	153	Level 3
	Del Monte Hospital-Bugo	Private	6	Level 1
	Puerto Community Hospital	Private	54	Level 2
	Northern Mindanao Medical Center	Government (DOH retained)	384	Level 3
Central	Polymedic General Hospital	Private	106	Level 4
	Sabal Hospital Inc.	Private	91	Level 3
	Cagayan de Oro Medical Center	Private	207	Level 2
	CDO Maternity Children's Hospital and Puericulture	Private	70	Level 3
	XU Community Hospital	Private	55	Level 2

Figure 3.7
Health Facilities Map
Cagayan de Oro City

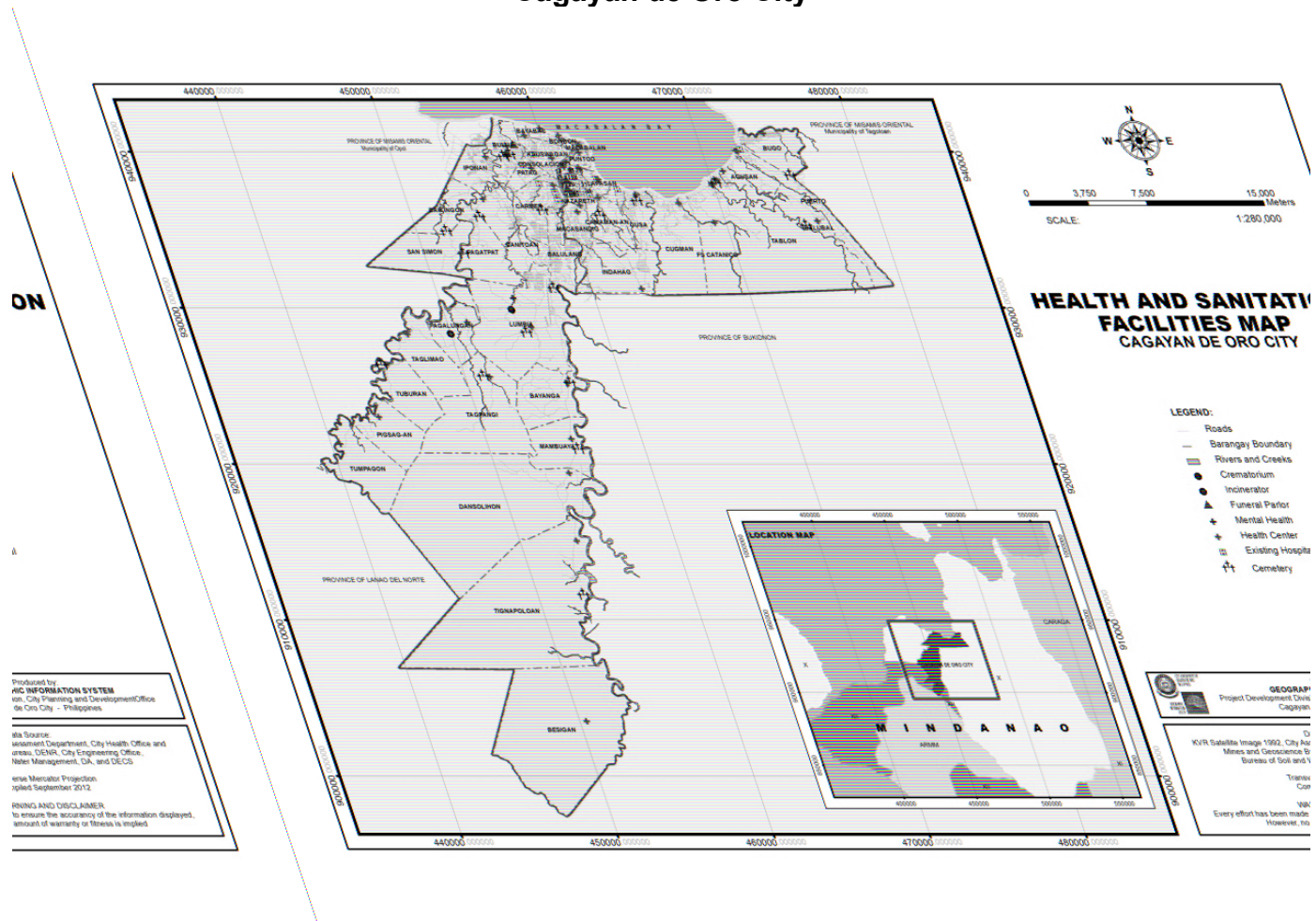


Table 3.8 below shows two of the government hospital's occupancy rate, patient – day's utilized, total annual expenditure and average cost per patient per day (in Philippine peso). The occupancy rate is an indicator of inpatient utilization. In 2009, the JRBGH income is only PhP 9,619,860 but with expenditures of PhP 71,904,304.

Table 3.8
Utilization of Government Hospitals Service and Cost/Patient Day 2009
Cagayan de Oro City

Gov't Hospital	% Occupancy	Patient Days Utilized	Total Amounts Expenditures(PhP)	Average Cost Per Inpatient Day (PhP)
JRBGH	103%	2,809,405	Php71,904,304	Php2,559.41
NMMC	134.40%	14,716,800	Php336,849,380	Php2,288.3

The table shows the hospital performance of both JR Borja General Hospital and Northern Mindanao Medical Center. Both hospitals are exceeding their Bed Occupancy Rate and Average Daily Census is also exceeding beyond the authorized bed capacity. Patients tend to go to the higher level hospital as exemplified by the higher occupancy rates of Northern Mindanao Medical Center as compared to the occupancy rate of JR Borja General Hospital. Northern Mindanao Medical Center also has a much higher number of beds as reflected in Table 3.13 with 384 bed capacity while JR Borja General Hospital only has 123 bed capacity. There are a total of 318 patients referred by JRBGH to other hospitals. In terms of referrals and received a total of 157 referrals from other health facilities mainly from the city's barangay health centers. JR Borja General Hospital has more referrals for further management due to lack of equipment and specialist, ex. CT – scan, dialysis machine, neurologist, etc. More referrals from JRBGH is also caused by a low number of bed capacity to properly accommodate patients, thus referral to patient's hospital of choice is necessary.

There are also a higher number of charity admissions as compared to PhilHealth admissions and a very low paying admission.

For surgical procedures, JRBGH has a lower census for both major and minor operations in relation to the number of patients seen, owing to lack of necessary equipment and materials for the operation and inadequate specialists, physicians and anesthesiologists.

REFERRAL SYSTEM

Figure 3.8. Referral flow from Highland District to nearest public and private hospitals in CDO City

High Maternal Mortality. City's maternal mortality is far from achieving the MDG target for 2015, which is 170/100,000LB. The city was persistently and steadily increasing from 170/100,000LB in 2010. However, in 2011, it was 170/100,000LB. This is due to active monitoring of maternal deaths starting 2006, see Figure 3.7. The improvement in data recording at the same time, ensuring that all the health facilities report maternal deaths. The improvement in data recording of maternal deaths starting 2006, see Figure 3.7. The picture of the magnitude of maternal deaths is the high maternal mortality, such as; the lack of postpartum care, home deliveries after supplementation, delays in referral of emergency cases and low contraceptive prevalence rate. In addition, the referral hospitals are located in the city, thus the increase in death. All these factors will be further illustrated in the next discussions below. Very striking in the review of maternal deaths is the fact that most deaths (uterine atony, uterine rupture and uterine inversion) are due to incompetence of the person that conducted the delivery. Most of these deliveries occurred at home assisted by TBA. There were also considerable numbers of teenage maternal deaths. In fact, in 2011, 30% of maternal deaths are teen-age mothers.

Figure 4: Nine Years Trend of Maternal Mortality Ratio

In 2011, most common causes of maternal deaths were eclampsia-preeclampsia, followed by uterine atony, and then amniotic fluid embolism on 3rd. Sepsis and congenital heart disease shared on 4th rank. See Figure 3.7. All of these were preventable causes of maternal deaths if only early and adequate interventions were in place. More so, strict adherence to safe motherhood policy, that includes regulating birthing homes and traditional birth attendants, should be imposed.

Data also showed that maternal deaths are occurring in densely populated areas while no deaths occurred in the rural or highland areas. This clearly

implies that despite the availability and accessibility of health facilities where a pregnant mother could travel less than 15 minutes to the nearest health facility for care, most of them prefer to deliver at home assisted by TBA. Several factors can be hypothesized such as, social exclusion of people belonging to marginalized sectors, level of education of pregnant mothers, poor seeking behaviors of pregnant mothers, affordability of health services, unregulated functions of TBA and weak support and referral system.

Percentage of facility based deliveries NOH target for the past years. Notably, to 84%. However despite improvement it did not reduce the number of maternal most deaths either occur at home or happen emergency arises. Factors involved were there are already 9 BEmONC Teams that need to be upgraded to become BEmONC equip the BEmONC areas for accreditation

Figure 3.11 Rate of facility-based birth deliveries, 2005-2009
Cagayan de Oro City

High Infant Mortality. For six years steadily in significant numbers. Although 2015, which is less than 19 per 1,000 from 2001 data. The figure also shows further warrant careful analysis and

The consistent high number of infant late or delay referrals of non-CDO infant neonatal deaths from home deliveries assisted by TBA, poor child care at home, and poverty. The data may also show the need of strengthening its safe motherhood policy as more than two-thirds of infant deaths were neonates. Most of these neonates died either related to home delivery assisted by unskilled birth attendants or inadequate newborn care.

More so, more infant deaths occur in rural areas. The reasons of high maternal above may hold true also for infant deaths in rural areas is possible since immediately rather register their infant

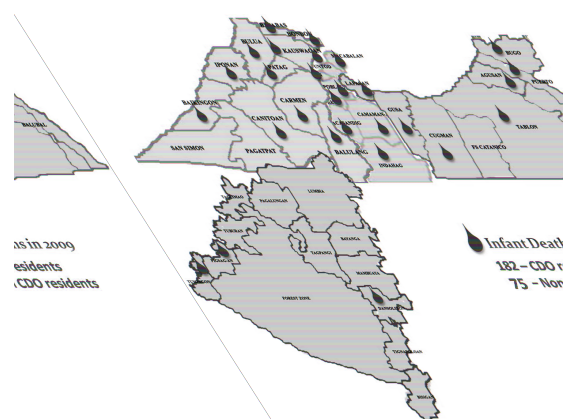


Figure 3.13
Mapping of Infant Deaths
Cagayan de Oro City

Sepsis and Respiratory Distress Syndrome are the leading causes of infant death in 2011. This pneumonia has always been the leading cause of infant death. However, since there was an increase in the number of infant deaths, pneumonia was the leading cause of infant death. Poor antenatal care is one of the factors affecting pregnancy outcome. Sepsis was the leading cause of infant death at home. Pneumonia is the 3rd leading cause of infant death. It was shown also that incidence of pneumonia deaths was lowered. Factors affecting the

outcome of pneumonia include nutrition, immunization coverage, micronutrient supplementation and early referral of complicated cases. A number of health personnel needs to be trained for IMCI.

Table 3.9
Leading Cases of Infant Death, 2011
Number and Rate / 1,000 LB
Cagayan de Oro City

Leading Causes	Number	Rate
Sepsis	39	2.69
Respiratory Distress Syndrome	39	2.69
Pneumonia	32	2.21
Asphyxia	20	1.38
Congenital Heart Disease	19	1.31
Age	17	1.17
Meningitis	11	.76
Multiple Congenital Anomalies	11	.76
Aspiration	6	.41

Double burden from communicable diseases and lifestyle-related diseases. Six out of ten leading causes of death are lifestyle related diseases. Hypertensive Vascular Disease ranked 1st. Cancer in all forms ranked 2nd. This is closely followed by other lifestyle related diseases: Cerebrovascular Disease (5th), diabetes mellitus (6th), and Coronary Artery Disease (7th). There were 2 Cagay-anons per day who died of diseases related to circulatory system. Factors influencing the cause of death are cigarette smoking, unbalanced/unhealthy diet, lack of exercise, stress, warmer environment due to climate change, lack of knowledge about the disease, and lack of access to diagnostics and treatment. See Table 3.16.

Table 3.10
Leading Causes of Death (all ages)
Cagayan de Oro City

Leading Causes	2009	2010	2011
Pneumonia	531	527	390
Cancer	453	475	483
Cerebro-Vascular Disease	419	400	292

Coronary Artery Disease	407	379	250
Senility-Debility	205	289	536
Accident	202	183	211
Sepsis	184	187	152

Sexually Transmitted Infections prevalence rate in 2011 is 8.66 among high risk groups. The STI clinic of City Health Office regularly conducted orientation of registered PIP (people in prostitution) on STI, HIV and AIDS prevention and control. Since we are sentinel area, the city conducted an IHBSS (Integrated HIV Behavioral and Serologic Survey in 2011. No HIV case was detected. But the CHO has already identified 22 cases of HIV positive in

Table 3.11
Prevalence Rate of Sexually Transmitted Infections, CDO City, 2011

Infection	STI UNIT - CITY HEALTH OFFICE
	2009 (%)
Gonorrhea	3.4
Non-gonorrheal Infection	1.15
Bacterial Vaginosis	0.5
Genital Wart	0.15
Trichomoniasis	0.7
Herpes Infection	0.06
Candidiasis	2.7

Source: Sexually Transmitted Infection Unit –
Cagayan de Oro City Health Office

The City is on its on year implementation of mass treatment for filariasis with accomplishment of 104.25%. The barangay should continue to support the campaign against filariasis more importantly during the conduct of mass treatment in their respective barangays. Massive information drive should be done before and during the mass treatment to attain 100% accomplishment.

The city has two cases of human rabies in 2011. Although the Rabies control ordinance has been passed, there were 5,188 cases of dog bites and 3,988 (76.66%) were given active rabies immunization. These dog bite cases included those from the neighboring areas who availed of our services. There were 538 (13.49%) clients given both the active and passive anti-rabies vaccines. The City bought a number of vaccines to augment the supplies given by the CHD-NM. More resources are needed to implement the Rabies control ordinance which includes registration and vaccination of all dogs in the city. Several activities were conducted by the City Veterinary Office to minimize population of stray dogs through regular pamatong. Though many efforts are needed, the city aims to achieve rabies-free zone by 2013. It is therefore imperative that vaccines and supplies for human and dog anti-rabies

immunization should be sustained and Rabies Control ordinance be fully implemented.

Safe water drinking supply and a safer environment has been established in this city due to the presence of an efficient water system. Performance in providing both accessible safe water and accessible sanitary toilet facility achieved the 2010 target of 94% and 91%, respectively. Not to mention that the highland report was underscored due to failure of accounting of a number of antipolo-type toilets present in the area, which are considered in the list of sanitary toilet facility,

For the last three years, it was noted that the number of underweight among 0-71 months old children was consistently declining. Nevertheless, the nutritional status of the city may be affected by the coverage of Operation Timbang. In 2011 the coverage was only 79%. Thus the nutritional status resulting from operation timbang may not be the true picture. The Barangay Nutrition Committee should be reactivated in all barangays to assist the BNS in the prevention of malnutrition through weight monitoring. Factors affecting this are family size, family income, knowledge of care giver on preparation of nutritious food and access in all health services. The city needs to have comprehensive program for rehabilitation of underweight and severely underweight children.

Table 3.12
Malnourished Children For the Last Three Years
Cagayan de Oro City

Degree of Malnutrition	2009	2010		2011	
	No.	No.	Increase/ Decrease	No.	Increase/ Decrease
Severely Underweight	571	1,003	432	850	-153
Underweight	4,495	3,428	-1,067	3,026	-402
Total	5,066	4,431	-635	3,876	-555

Source: Cagayan de Oro City Health Office

Figure 3.14
Malnutrition Status for the last three years, 2009-2011

Cagayan de Oro City

Cemeteries and Memorial Parks

Cagayan de Oro City Memorial Park is located at Bolonsori, Camaman-an, with an area of 19.6716 hectares or 196,716 sq.m. As reflected in Table 3.25, number of burials in the said memorial park totaled to 51,979 as of 2011. As of the present the city memorial park is congested, some plots are located in critical areas and flood prone along the bank of the creek. Records show an estimated average of five (5) burials a day.

Complementing the city memorial park are four (4) private memorial parks namely: Cagayan de Oro Golden Memorial Park, Divine Shepherd Memorial Park, Green Hills Memorial Park, and Golden Haven Memorial Park. These memorial parks have more than enough plots to accommodate more burials (Table 3.25).

Relatively, there is a need for the city to acquire and develop land to meet future burial requirements in the city.

Table 3.13
Existing Cemeteries and Memorial Parks, 2011
Cagayan de Oro City

NAME OF CEMETERIES/ MEMORIAL PARKS	BARANGAY	OWNERSHIP (PUBLIC OR PRIVATE)	AREA has.	CAPACITY /NO. OF BURIALS	REMARKS
Cagayan de Oro Golden Memorial Garden Phase I & II	Lumbia	Private	15	39,094	
Divine Shepherd Memorial Garden	Bulua	Private	7.4	7,865	
Green Hills Memorial Park	Bulua	Private		5,290	
Bolonsori - CDO Memorial Park	Camaman-an	Public	19.6716	51,979	Congested Flooded Located in critical areas
Bulua Cemetery	Bulua	Public	0.750	72	Congested
IFI Cemetery	Bulua	Private	14,970	74	
Iponan Cemetery	Iponan	Public	1.2248		Fully occupied
Canitoan Cemetery	Canitoan	Public	1.9	487	Congested
Gusa Cemetery	Gusa	Public	0.5912		Fully occupied
Golden Haven Memorial Park	Bulua	Private	10.0202	197/ 22,068	

Tablon Barangay Cemetery	Tablon	Public	3.000		Fully occupied
Baikingon Barangay Cemetery	Baikingon	Public	1.0		
Balubal Barangay Old Cemetery	Balubal	Public	1.0		
Bayanga Barangay Cemetery	Bayanga	Public	1.0		
Besigan Barangay Cemetery	Besigan	Public	-		
Canitoan Barangay Cemetery	Canitoan	Public	1.9	487	Congested
Dansolihon Barangay Cemetery	Dansolihon	Public	0.75		
Roman Catholic Church	Agusan	Private	0.2		Fully occupied
Bugo Memorial Home	Bugo	Public	2.4	91	
Taglimao Cemetery	Taglimao	Public	-	-	
Tignapoloan Cemetery	Tignapoloan	Public	2.5	-	
Tuburan Cemetery	Tuburan	Public	-	-	
Tumpagon Cemetery	Tumpagon	Public	1.0	-	

Source: Cagayan de Oro City Health Office

Table 3.14
Medical Health Facilities and Personnel, 2011
Cagayan de Oro City

Barangay	FACILITY			PERSONNEL						
	Hospitals	Category	Capacity	Doctors	Nurses	Mid-wives	Dentist		Sanitary Inspector	Total
	PUBLIC									
Patag	Camp Evangelista	Sec	79	52*	17	14	2	5	-	90

	Station Hospital									
Carmen	JR Borja Memorial City Hospital	Sec	123	26*	51	7	2	10	-	96
Barangay 27	Northern Mindanao Medical Center	Ter	384	130*	119	36	2	7	-	294
Barangay 40	City Health Office		-	16	40	72	6	11	23	168
	PRIVATE									
Kauswagan	CDO Polymedic Medical Plaza	Ter	185	437*	81	0	2	4	-	524
Barangay 14	CDO Polymedic Medical General	Ter	106	444*	83	0	1	6	-	534
Gusa	Capitol University Medical Clinic	Ter	153	340	92	21	3	12	-	468
Barangay 02	Cagayan de Oro Maternity Children's Hospital & Puericulture	Sec	70	35*	15	12	1	5	-	68
Barangay 20	Cagayan de Oro Medical Center	Ter	207	68*	150	11	2	10	-	241
Barangay 20	Doctor's Sabal Hospital	Sec	91	49*	69	4	1	1	-	124
Barangay 40	Community Health Care Center	Sec	55	57*	26	11	1	4	-	99
Carmen	Madonna & Child Hospital	Ter	177	56*	130	13	1	6	-	206
Camaman-an	Maria Reyna Hospital	Ter	115	193*	147	32	2	16	-	390
Puerto	Puerto Community Hospital	Sec	54	38*	18	1	1	1	-	59
Bugo	Del Monte Hospital	Sec	6	-	-	-	-	-	-	6
	TOTAL		1,805	1,941	1,038	234	27	98	23	3,277
*Includes Consultants										

Source: City Health Office (CHO)

Table 3.15
Current and Projected Needs for Health
Cagayan de Oro City

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Medical Officers (City Health Office)	2	2	2	2	2	2	2	2	2	2
Sanitary Inspectors (City Health Office)	1	2	2	2	2					
Doctors (JRBGH)	3	3	3	3	3	3	2	2	2	2
Nurses (JRBGH)	3	3	3	3	3	3	3	1	1	1

Lying-In		8	8	8	4	4	4	4	4	4
Youth Center	4	4	4							
Rehabilitation & Retrofitting of Existing Plumbing Pipes	*									
Ambulance Vehicle	*									
Establish Computerize Hospital IS	*									
Salter Weighing Scales	*									
Height Board	*									
Length Board	*									
Establishment of Weighing Post & BNS Physical Center		*	*							
Recruit BNS for Barangays without BNS				*						
Additional BNS	*	*	*	*						
Monthly Allowance	*	*	*	*						
Establishment of Nutrition Center	*	*	*	*						

* Projected Needs

Table 3.16
Technical Findings on Health

Technical Findings/Observations	Implications	Policy Option/Intervention
	<ul style="list-style-type: none"> Increased maternal deaths Increased Infant Deaths Increased maternal morbidity (anemia, malnutrition) 	<ul style="list-style-type: none"> Strengthen referral system Establishment of BEmONC areas Intensify pregnancy tracking Strengthen Birth and Emergency Plan Ensure quality Antenatal care with emphasis on Health Information Provision of Micronutrient

	<ul style="list-style-type: none"> Increased maternal deaths Increased Infant deaths Later referral of obstetrics and pediatric emergencies Increased Infant mortality rate Increased incidence of prematurity Increased incidence of congenital anomalies Increased Infant mortality Increased morbidity Increased weight loss – malnutrition Increased infant mortality High financial burden on hospitalization/ medication Increased weight loss-malnutrition Increased infant death Meningitis may result to CNS handicap High financial burden on hospitalization/ medication 	<p>Supplementation</p> <ul style="list-style-type: none"> Provision of drugs and medicines for safe deliveries (to include Magnesium Sulfate and Hydralazine) Regular conduct of Maternal Death Review to be participated by Barangay Council and immediate family members, and the community Passage of Ordinance regulating the activities of Hilots Passage of Ordinance regulating the Birthing Homes Hilots as members of Community Health Team Pregnancy Tracking Ensure Facility-Based Deliveries assisted by Skilled Birth Attendants (Doctor, nurse or midwife) Ensure increase coverage of Tetanus Immunization among pregnant women Pregnancy tracking Micronutrient Supplementation on pregnant women Improve Health information service for pregnant women High coverage of primary immunization among infants Regular growth monitoring High coverage of exclusive breast feeding Essential new born care High coverage of exclusive breast feeding Essential newborn care (Unangyakap) 100% access to potable water 100% access to sanitary toilets High coverage of deworming activities Increase coverage of primary immunization especially giving of BCG at birth High coverage of exclusive breast feeding Proper nutrition
--	--	--

	<ul style="list-style-type: none"> • Increased morbidity and mortality • High financial burden on hospitalization/ medication • Economic burden due to absenteeism or loss of job due to hypertension 	<ul style="list-style-type: none"> • HATAW activities in the workplace • Anti-smoking policy • Strengthen lab screening • Provision of emergency and start up meds • Provision of bicycle lane • Promote vehicle less lane in DV Soria to • Provision of physical fitness equipment in each barangay, utilizing all covered courts as fitness gym • Regular physical checkup for all City Hall employees • Intensify sports activities among adolescents and youth during summer breaks • Intensify sports activities among City Hall employees • Intensify community awareness on lifestyle related diseases
	<ul style="list-style-type: none"> • Increased morbidity and mortality • High financial burden for hospitalization/medication • Economic difficulty due to death of bread winner 	<ul style="list-style-type: none"> • Increase community awareness on early detection of signs and symptoms of the disease • Promotion of Clean Air Act • Intensify Anti-smoking campaign • Promote Stress management among schools, work place • Promote good nutrition among children and adults • Promote SBE (self breast exam) and women and DRE (digital rectal exam for male 40 yrs. and above • Promotion of Pap Smear among women 40 years and above
	<ul style="list-style-type: none"> • Increased morbidity and mortality • High financial burden for hospitalization and medication • Absenteeism at school or work 	<ul style="list-style-type: none"> • Intensify primary immunization among children • Proper nutrition • Livelihood for families to increase income • Provision of medicines • Improve JRBGH facilities • Increase enrolment in PHIC for indigent clients • Increase community awareness on early signs and symptoms of pneumonia • Provision of micronutrient supplementation
	<ul style="list-style-type: none"> • Increased morbidity and mortality • Physical /neurological deficits may result to cessation of school / work → economic burden 	<ul style="list-style-type: none"> • Physical checkup for blood pressure and blood sugar • HATAW activities • Proper nutrition • Provision of emergency and start up medications

	<ul style="list-style-type: none"> Financial burden on hospitalization , medication and rehabilitation Increase morbidity and mortality Economic burden – most of the patients belong to the working group Financial burden on hospitalization and medication Stunted/wasted children can be seen due to selective eating or not eating high protein foods. Conduct of OPT in open field contribute health hazard to volunteers Non formulation of Barangay Nutrition Action Plan non-inclusion of budget for nutrition program in the Barangay Development Plan Lack of Integration/coordinative nutrition plan of activities No immediate data on nutrition particularly the 0-71 months old preschoolers, pregnant and lactating etc. Occurrence of health related diseases Lukewarm/ineffective working attitude of volunteer workers in the barangay Gradual damage of interior of the building Damage to supplies Sterility of the area 	<ul style="list-style-type: none"> Access to laboratory exams for blood chemistry Health centers equipped with supplies and medicines Strengthen Barangay TB taskforce to help in case detection , referral and as treatment partner Proper nutrition Early detection of sign and symptoms Access to laboratory and treatment Establishment of additional Microscopy centers (4 centers – additional Medtechs, equipment and supplies) Provision of anti TB drugs for sputum negative X-ray positive clients Screening for all food handlers and public vehicle drivers for PTB High coverage of BCG at birth Provision of tools for measuring height and length of the preschoolers <ul style="list-style-type: none"> salter weighing scales height board length board Training on proper measurement and use of information generated to promote optimum growth Establishment of weighing post and BNS physical center in all barangays. Close coordination with City DILG in the orientation of Barangay Nutrition Committee Formulation of the 2011-2016 PPAN w/ member agencies of nutrition/ BNS Volunteers and Barangay Officials Recruit/assign BNS to act as monitor and coordinators for nutrition program activities
--	---	--

	<ul style="list-style-type: none"> • Ineffective, unsafe, transport system • Increased patient waiting time in billing, cashiering services, outpatient department, data retrieval 	<ul style="list-style-type: none"> • Conduct Healthy lifestyle activities • Increase of BNS monthly allowance to at least Five Thousand Pesos (P5,000.00) • Establishment of Nutrition Center thru Congressional Funds • Advocate for the realization of the City Investment Plan for Health (CIPH 2010-2015) • Rehabilitation & retrofitting of existing plumbing pipes using funds from the Health Facilities Enhancement Program (HFEP) for 2012 by the DOH CHD NM • Purchase of new ambulance vehicle • Established computerized hospital information system
--	--	---

Table 3.17
Ten Leading Causes of Morbidity for the Last Three Years (All Ages)
Cagayan de Oro City

CAUSES	No. of Cases		
	2009	2010	2011

Coughs and Colds	1	2,395	1	1,450	1	2,018
Pneumonia	3	1,238	2	1,033	2	845
Wound	-	-	3	747	4	400
Influenza	2	1,854	4	693	3	615
Upper Respiratory Tract Infection	6	646	5	634	6	245
Bronchitis	8	117	6	438	5	394
Diarrhea	7	556	7	406	7	236
Hypertension	10	63	8	276	9	175
TB Respiratory	4	1,147	9	274	8	198
Dog Bite	9	66	10	242	10	172
Skin Lesion	5	689	-	-	-	-
Parasitism						
Asthma						

Source: City Health Office (CHO)

Table 3.18
Ten Leading Causes of Mortality for the Last Three (3) All Ages
Cagayan de Oro City

CAUSES	No. of Cases					
	2009		2010		2011	
Pneumonia	1	531	1	527	4	390
Cancer	2	453	2	475	2	483
CVA/CVD	3	419	3	400	5	292
Coronary Heart Disease	4	407	4	379	7	250
Hypertensive Vascular Disease	5	205	5	289	1	536
Accident	7	184	6	187	10	152
Senility-Debility	6	202	7	183	8	211
Diabetes Mellitus	9	130	8	179	6	292
Sepsis	8	168	9	148	-	-
PTB	-	-	10	146	-	-
Chronic Renal Failure	10	112	-	-	-	-
Tuberculosis	-	-	-	-	9	185
Asphyxia-Drowning	-	-	-	-	3	402

Source: City Health Office (CHO)

Table 3.19
Number of Households in Occupied Housing Units by
Type of Toilet Facilities, 2010
Cagayan de Oro City

Type of Toilet Facilities	Number of Households	%
Household with Sanitary Toilets	125,093	91.0%
Household with Unsanitary Toilets	5,499	4.0%
Household without Sanitary Toilets	6,873	5.0%
Total	137,465	100%

Source: City Health Office/CPDO

Table 3.20
Solid Waste Generation by Source, 2011
Cagayan de Oro City

Source	Types of Waste	Volume of Solid Waste Generated (tons/day)	Volume of Solid Waste Collected (tons/day)	Disposal Methods/ Treatment Facilities	Disposal Site
Domestic	218,845	210.7 tons	262 tons/day	Dump	
Commercial	50,000	per day	60 tons/day	Dump	
Industrial	3,300		4 tons/day		
Hospital	681		.8 ton/day	Buried	
Others					

Source: Primary Survey: City Records

Table 3.21
Methods of Solid Waste Disposal/Treatment, 2011
Cagayan de Oro City

Methods	Quantity (Total City Solid Waste Generated)	No. of Household Served	Agency Responsible
1. Collected and Disposed to: - Open Dump - Controlled Dump - Sanitary Landfill	272,826 cu.m.	70% 84,293 (HHs)	LGU CDO
2. Composting			
3. Recycling	81,847 cu.m. (30%)		City Dumpsite
4. Not Collected: - Burned - Dumped in individual open pit (not burned)			
5. Others			

Source: CLENRO

Table 3.22
CCA-DRR CONNECTIVITY MATRIX FOR HEALTH

ELEMENT: PEOPLE
DESCRIPTOR: RESILIENT and GOD-CENTERED

SUB-SECTOR: HEALTH

INDICATORS	CCA + DRR CONNECTIVITY		Policy options/ Intervention
	What is the impact/effect of the indicator in attaining climate resiliency/reduction of disaster risks?	What is the impact/effect of changing climate and occurrence of disaster to the local development?	
High incidence of cough and colds _____ - 10% decrease of incidence	Changing climate results to erratic environment which in turn lower respiratory resistance. Lower respiratory resistance results to increase risk to cough and colds	Decrease in incidence of cough and colds may increase productivity and at the same time improve adaptive capacity	Intensify community awareness on the effect of changing climate will results to increase cough & colds. Provision of drugs & medicines.
Hypertension ranked 1 st cause of death in 2011	Changing climate results to higher daytime temperature which may be critical to hypertensive individuals	Hypertensive crisis that results from warmer environment may cause increase morbidity and mortality and increase in financial burden for the family	Passage of Anti-Smoking Ordinance. HATAW activities in the workplace. Intensify community aware-ness on lifestyle diseases. Provision of physical fitness equipment in every brgy., utilizing all covered courts as fitness gym.
Skin diseases to include skin cancer	Thinning of the ozone layer cause increase radiation from the sun that may cause skin diseases to include skin cancer	High incidence of skin disease increase financial burden for hospitalization and medication. May also results to high economic burden	Intensify community awareness that radiation from the sun may cause skin diseases or skin cancer. Provision of drugs/ medicines.
Increase incidence of leptospirosis, post Sendong (15 deaths)	Changing climate may result to flash floods that are contaminated with leptospira	Leptospirosis is highly debilitating and fatal disease. This in turn will affect local development.	Intensify community awareness on how to prevent leptospirosis which is a fatal disease. Provision of drugs & medicines during calamities.
Diarrhea ranked 5 th leading cause of death among infants	Flash floods may cause destruction and or contamination of water system that in turn will result to increase incidence of water-borne diseases.	Increase morbidity and mortality due to acute gastroenteritis cause high financial burden that will affect the local development.	Regular provision of ORS. Intensify community aware-ness on bacteria contamination of water during and after flashfloods. Proper hand washing during food preparation.

3.3 Education

Situational Analysis

Elementary and Secondary Education

The City of Cagayan de Oro has 70 public elementary schools and 37 public secondary schools. Complementing the public schools are the 75 private elementary schools, 46 private secondary schools and 90 preschools. With the institutionalization of Kindergarten Education into the Basic Education System R.A. No. 10157 otherwise known as “An Act Institutionalizing the Kindergarten Education into the Basic Education System and Appropriating Funds Therefor,” all public elementary schools in the city are offering kindergarten classes to cater the 5 year old school children. The different kindergarten programs include Kindergarten Regular Program (KRP), Kindergarten Volunteer Program (KVP) and Kindergarten Summer Program (KSP).

For school year 2011-2012, there are 12,159 pupils enrolled in Kindergarten, 79,368 pupils in elementary and 29,714 students in the public secondary schools. In the private schools, there are 5,992 kindergarten pupils, 12,600 elementary pupils and 11,521 secondary students. Public schools enrolment manifested an increase of 3.72% for the elementary and 2.50% in the secondary compared to the previous school year 2010-2011. The private schools also registered an increase of 1.42% for elementary and 6.86% in the secondary. The booming economy of the city and the influx of subdivisions and other socialized housing projects is one major factor on the increase of enrolment in both public and private schools. More families have opted to establish their dwelling in the city with the hope of uplifting their source of income and providing quality education to their children. Cagayan de Oro also serves as the melting pot for Region X.

Elementary teacher-pupil ratio is 1:43.83 and 1:35.86 in the secondary. The rainbow spectrum reveals the need of more teachers in the secondary and for the Kindergarten.

Classroom-pupil ratio is 1:56.49 in the public elementary and 1:60.03 in the public secondary. This signifies that more classrooms are needed and with the institutionalization of Kindergarten in basic education, this also means additional classrooms to be constructed with provisions for 5 year old pupils.

The public schools in the city still need more science equipment and laboratories to improve their knowledge and skills in Science. Sports facilities and equipment are also very important in honing the talent of our young athletes. The Division Office and the City Government spent a large sum of money for their trainings. The Cagayan de Oro Athletic Association (COAA) became the champion for three consecutive years in the Palarong Pampook. As the regional champion, majority of the Northern Mindanao Regional

Athletic Association (NMRAA) athletes who competed in the Palarong Pambansa came from Cagayan de Oro City.

The increase of enrolment in every level, the Institutionalization of Kindergarten and the implementation of K to 12 Program collaboratively point to the need to purchase additional textbooks in all levels.

Although the enrolment is continuously increasing, participation rate is decreasing in both elementary and secondary level. This can be attributed to the economic/financial constraint. Some students are forced to work for a living and even others serve as the bread winner of the family.

To address the low participation rate and high dropout rate especially in the secondary, the Division of Cagayan de Oro City implemented the Dynamic Learning Program and the Open High School Program.

The Alternative Learning System of Cagayan de Oro City Division also provided alternative opportunities to our less privileged school children to acquire education. The ALS offered various programs from literacy to livelihood. This is to ensure maximum participation among all learners.

Higher Education

The City Government is true to its commitment to help the poor but deserving students has been extending financial support through its Special Program for Employment of Student (SPES) and Barangay College Scholarship Program (BCSP).

In school year 2010-2011, 524 students have availed of the BCSP. The number of students accommodated in the program has increased every school year. For this year, total Fund Allocation has reached to 13.5 Million.

The private sector plays a major role in the delivery of tertiary educational services. Private school flourish giving parents and students more options in the choice of a school. As of SY 2011-2012 the City of Cagayan de Oro has sixteen (16) higher learning schools, fifteen (15) are private-owned. Thus, only 17 percent of College enrollees are in government-operated Mindanao Polytechnic State College (MPSC). In addition, the Bukidnon State University has operated a satellite school located at Misamis Oriental General Comprehensive High School (MOGCHS) which contribute about 1.8 percent of college enrollees in government school. It implies that around 81.2% of the enrolment goes to the private owned colleges/universities.

A total of four (4) HEIs in Cagayan de Oro City which are reported to be exposed to one type of hazard which is flooding. They are as follows: Golden Heritage Polytechnic College (GHPC), Carmen; Liceo de Cagayan University

(LdCU), Carmen; Mindanao University of Science and Technology (MUST), Lapasan; and, Pilgrim Christian College (PCC), Barangay 19. LdCU and GHPC are located at the bank of Cagayan River and the latter was hard hit by reporting P4 million value of damages to school properties including 70 newly purchased computers. LdCU didn't report damage to properties but had 24 students and 136 staffers as victims of Typhoon Sendong floodings. The same is true with PCC which reported 35 students and 42 school employees affected by Typhoon Sendong floodings. MUST has been constantly exposed to floodings because of its proximity to Bitan-ag Creek which overflows during heavy rains.

Figure 3.15
Educational Facilities Map
Cagayan de Oro City

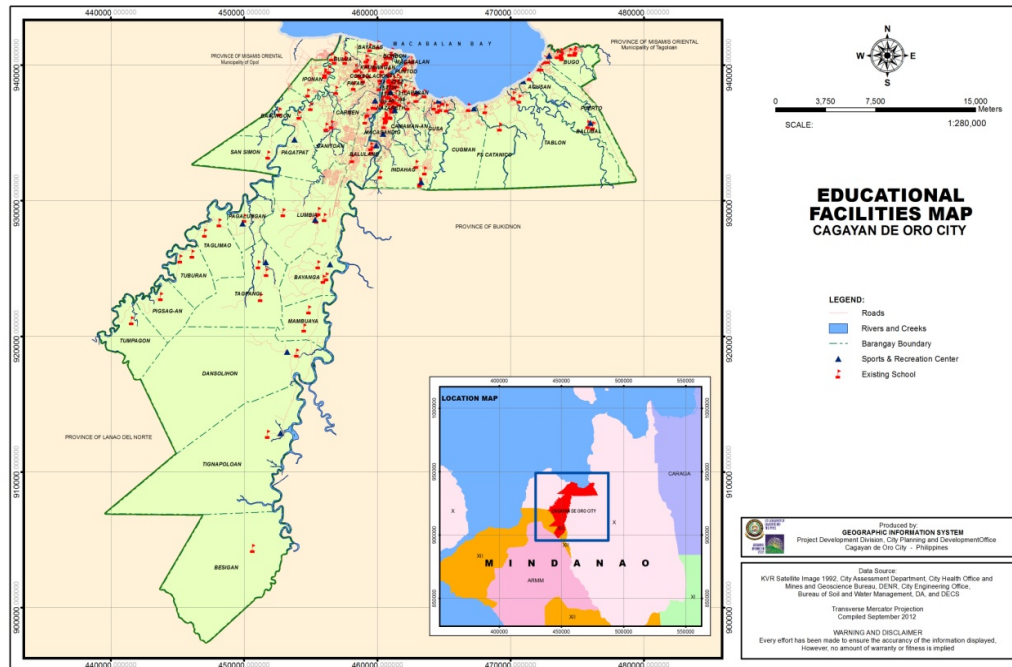


Table 3.23
Schools by Level, Type, Facilities and Condition, SY 2010-2011
Elementary Level, Cagayan de Oro City

School	Location (Brgy.)	Area Occu- pie d (Ha.)	Type		Facilities and Condition						
			Public	Private	S c i e n c e L a b o r a t o r i e s	L. A. W o r k - s h o p s	L i b r a r y	L i b r a r y	C o m f o r t R o o m	P l a y g r o u n d	(Others) Computer Rooms
Bayabas ES	Bayabas	NDA	Public		N	N	N	G	G	NDA	N
Bonbon ES	Bonbon	NDA	Public		N	N	N	N	G	NDA	N
Bongbongon ES	Kauswagan	NDA	Public		G	N	G	G	G	NDA	G
Kauswagan CS	Kauswagan	NDA	Public		G	N	N	N	G	NDA	N
Balongkot ES	Dansolihon	NDA	Public		N	N	G	N	G	NDA	N
Baluarte ES	Lumbia	NDA	Public		N	N	N	N	G	NDA	N
Batinay ES	Tagpangi	NDA	Public		N	N	G	N	G	NDA	N
Bayanga ES	Bayanga	NDA	Public		N	N	N	N	G	NDA	N
Besigan ES	Besigan	NDA	Public		N	N	N	N	G	NDA	N
Dansolihon ES	Dansolihon	NDA	Public		N	N	N	N	G	NDA	N
Iba ES	Dansolihon	NDA	Public		N	N	N	N	G	NDA	N
Kiam-Is ES	Lumbia	NDA	Public		N	N	N	N	G	NDA	N
Lumbia CS	Lumbia	NDA	Public		N	N	G	N	G	NDA	N
Magayad ES	Dansolihon	NDA	Public		N	N	G	N	G	NDA	N
Mambuaya ES	Mambuaya	NDA	Public		N	N	N	N	G	NDA	N
Man-Ai ES	Tignapoloan-an	NDA	Public		N	N	N	N	G	NDA	N
Midkiwan ES	Bayanga	NDA	Public		N	N	N	N	G	NDA	N
Pagalungan ES	Pagalungan	NDA	Public		N	N	N	N	G	NDA	N
Pigsag-An ES	Pigsag-an	NDA	Public		N	N	G	N	G	NDA	N
Taglimao ES	Taglimao	NDA	Public		N	N	G	N	G	NDA	N
Tagpangi ES	Tagpangi	NDA	Public		N	N	G	N	G	NDA	N
Tignapoloan-an ES	Tignapoloan-an	NDA	Public		N	N	G	N	G	NDA	N
Upper Tignapoloan-an ES	Tignapoloan-an	NDA	Public		N	N	N	N	G	NDA	N
Tuburan ES	Tuburan	NDA	Public		N	N	N	N	G	NDA	N
Tumpagon ES	Tumpagon	NDA	Public		N	N	N	N	G	NDA	N
Dunggoan ES	Tignapoloan-an	NDA	Public		N	N	N	N	G	NDA	N
Mangalay ES	Dansolihon	NDA	Public		N	N	N	N	G	NDA	N
Balulang ES	Balulang	NDA	Public		N	N	N	N	G	NDA	N
KM. 5 ES	Balulang	NDA	Public		N	N	N	N	G	NDA	N
Macanhan ES	Carmen	NDA	Public		N	N	N	N	G	NDA	N
Sacred Heart Vill ES	Carmen	NDA	Public		N	N	N	N	G	NDA	N
Upper Carmen ES	Carmen	NDA	Public		N	N	N	N	G	NDA	N
West City CS	Carmen	NDA	Public		G	G	G	G	G	NDA	G

Baikingon ES	Baikingon	NDA	Public		N	N	N	N	G	NDA	N
Bulao ES	Iponan	NDA	Public		N	N	N	N	G	NDA	N
Bulua CS	Bulua	NDA	Public		N	N	G	G	G	NDA	N
Pedro "Oloy" N. Roa, Sr. ES	Canitoan-an	NDA	Public		N	N	G	N	G	NDA	N
Camp Evangelista ES	Patag	NDA	Public		G	G	G	G	G	NDA	N
Canitoan-an ES	Canitoan-an	NDA	Public		N	N	N	N	G	NDA	N
G. L. Reyes-Anhawon ES	Bulua	NDA	Public		N	N	N	N	G	NDA	N
Iponan ES	Iponan	NDA	Public		N	N	G	N	G	NDA	N
Pagatpat ES	Pagatpat	NDA	Public		N	N	N	N	G	NDA	N
Pamalihi ES	Pagatpat	NDA	Public		N	N	N	N	G	NDA	N
San Simon ES	San Simon	NDA	Public		N	G	G	N	G	NDA	N
City CS	Barangay 29	NDA	Public		N	N	N	N	G	NDA	N
Cugman ES	Cugman	NDA	Public		N	N	G	N	G	NDA	N
East City CS (Lapasan)	Lapasan	NDA	Public		N	N	G	G	G	NDA	G
FS Catanico ES	FS Catanico	NDA	Public		N	N	N	N	G	NDA	N
Gusa ES	Gusa	NDA	Public		N	N	G	N	G	NDA	G
Kamakawan ES	Indahag	NDA	Public		N	N	G	N	G	NDA	N
Malasag ES	Cugman	NDA	Public		N	N	G	N	G	NDA	N
Agusan ES	Agusan	NDA	Public		N	N	N	N	G	NDA	N
Balubal ES	Balubal	NDA	Public		N	N	N	N	N	NDA	N
Bugo CS	Bugo	NDA	Public		G	G	G	G	G	NDA	G
Linangohan ES	Tablon	NDA	Public		N	N	N	N	G	NDA	N
Palalan ES	Tablon	NDA	Public		N	N	N	N	G	NDA	N
Puerto ES	Puerto	NDA	Public		G	N	N	N	G	NDA	N
Suntingon ES	Bugo	NDA	Public		N	N	N	N	G	NDA	N
Tablon ES	Tablon	NDA	Public		N	N	N	N	G	NDA	N
Corrales ES	Barangay 22	NDA	Public		N	N	G	N	G	NDA	N
Macabalan ES	Macabalan	NDA	Public		G	N	N	N	G	NDA	N
North City CS (Puntod)	Puntod	NDA	Public		G	N	N	N	G	NDA	G
St. John ES	Puntod	NDA	Public		N	N	N	N	G	NDA	N
Consolacion ES	Consolacion	NDA	Public		G	G	G	N	G	NDA	G
Camaman-An ES	Camaman-an	NDA	Public		G	N	G	N	G	NDA	N
Indahag ES	Indahag	NDA	Public		N	N	G	N	G	NDA	N
Macasandig ES	Macasandig	NDA	Public		N	N	N	N	N	NDA	N
South City CS	Nazareth	NDA	Public		N	G	G	N	G	NDA	N
Taguanao ES	Indahag	NDA	Public		N	N	N	N	G	NDA	N

Table 3.24
Schools by Level, Type, Facilities and Condition, SY 2010-2011
Secondary Level, Cagayan de Oro City

School	Location (Brgy.)	Area Occupied (Ha.)	Type	Facilities and Condition
--------	------------------	---------------------	------	--------------------------

CLUP Volume 3 – The Sectoral Studies

			Public		Science Laboratories					Playground	(Others) Computer Rooms
Bayabas NHS	Bayabas	NDA	Public		G	G	G	G	G	NDA	G
Bulua NHS	Bulua	NDA	Public		G	N	G	G	G	NDA	N
Canitoan NHS	Canitoan	NDA	Public		N	N	G	N	G	NDA	G
Pedro "Oloy" N. Roa, Sr. HS	Canitoan	NDA	Public		N	N	G	N	G	NDA	N
Carmen NHS	Carmen	NDA	Public		G	N	G	G	G	NDA	G
Iponan NHS	Iponan	NDA	Public		N	N	G	N	G	NDA	N
Lumbia NHS	Lumbia	NDA	Public		N	N	G	N	G	NDA	N
Mambuaya NHS	Mambuaya	NDA	Public		G	N	G	N	G	NDA	G
Mambuaya NHS-Bayanga Annex	Bayanga	NDA	Public		N	N	N	N	N	NDA	N
Tignapoloan NHS	Tignapoloan	NDA	Public		N	N	G	N	G	NDA	N
Taglimao NHS	Taglimao	NDA	Public		N	N	G	N	G	NDA	N
Taglimao NHS-Besigan Annex	Besigan	NDA	Public		N	N	N	N	G	NDA	N
Tagpangi NHS	Tagpangi	NDA	Public		G	N	G	N	G	NDA	G
Tagpangi NHS-Tuburan Annex	Tuburan	NDA	Public		N	N	G	N	G	NDA	N
Cagayan de Oro NHS - Balulang Annex	Balulang	NDA	Public		N	N	N	N	N	NDA	N
Mambuaya NHS-Dansolihon Annex	Dansolihon	NDA	Public		G	N	N	N	G	NDA	G
Taglimao NHS-Tumpagon Annex	Tumpagon	NDA	Public		N	N	N	N	G	NDA	G
Iponan NHS - San Simon Annex	San Simon	NDA	Public		N	N	G	N	G	NDA	G
Agusan NHS	Agusan	NDA	Public		G	N	G	N	G	NDA	G
Tablon NHS	Tablon	NDA	Public		G	N	N	N	G	NDA	G
Bugo NHS	Bugo	NDA	Public		N	N	G	N	G	NDA	G
Cagayan de Oro NHS	Nazareth	NDA	Public		G	G	G	N	G	NDA	G
Angeles Sisters NHS	Consolacion	NDA	Public		G	N	G	N	G	NDA	G
Gusa NHS (RSHS)	Gusa	NDA	Public		G	N	G	N	G	NDA	G
Gusa NHS-Cugman Annex	Cugman	NDA	Public		N	N	G	N	G	NDA	G
Indahag NHS	Indahag	NDA	Public		N	N	G	N	G	NDA	G
Lapasan NHS	Lapasan	NDA	Public		N	N	G	N	G	NDA	G
Macabalan NHS	Macabalan	NDA	Public		N	N	N	N	G	NDA	N
Puntod NHS	Puntod	NDA	Public		G	N	G	G	G	NDA	G
Balubal NHS	Balubal	NDA	Public		N	N	G	N	G	NDA	G
Puerto NHS	Puerto	NDA	Public		N	N	N	N	G	NDA	G
Camaman-an NHS	Camaman-an	NDA	Public		G	N	G	N	G	NDA	G
Lapasan NHS-Gusa Annex	Gusa	NDA	Public		N	N	N	N	G	NDA	G
Gusa NHS - FS Catanico Annex	FS Catanico	NDA	Public		N	N	N	N	G	NDA	G
Macasandig NHS	Macasandig	NDA	Public		N	N	N	N	N	NDA	N

Table 3.25
Student-Teacher and Student-Classroom Ratio by Level, SY 2011-2012
Cagayan de Oro City

Type/Level	No. of Enrollees			Total No. of Teacher	Total No. of Class-rooms	Pupil Teacher Ratio	Pupil Classroom Ration
	Male	Female	Total				
Public	40,860	38,508	79,368	1,858	1,405	42.72	56.49
Elementary	14,823	14,891	29,714	796	495	37.33	60.03
Secondary							

Table 3.26
Tertiary and Vocational/Technical Schools by Type and Total Enrolment, SY 2011 and 2012
Cagayan de Oro City

Name of School	Location Barangay	Area (Ha.)	Type	Total Enrolment	
				Male	Female
AMA Computer College	Barangay 39		Private	300	
Blessed Mother College	Barangay 14		Private	34	
Cagayan de Oro College	Carmen		Private	2,407	
Capitol University	Barangay 22		Private	3,244	
Golden Heritage Polytechnic College	Carmen		Private	158	
Liceo de Cagayan University	Kauswagan		Private	2,765	
Lourdes College	Barangay 04		Private	668	
Mindanao Institute of Career Management	Barangay 38		Private	1	
Mindanao University of Science and Technology	Lapasan		Public	3,651	
Oro Bible College	Carmen		Private	16	
Pilgrim Christian College	Barangay 19		Private	240	
Southern de Oro Philippines College	Barangay 23		Private	724	
St. John Vianney Theological Seminary	Camaman-an		Private	51	
STI Colleges of Mindanao	Kauswagan		Private	445	
Vineyard International Polytechnic	Barangay 27		Private	16	

College				
Xavier University	Barangay 40		Private	4,739
Total				19,459

Table 3.27
Historical Enrollment by Level for the Last Three School Years
Cagayan de Oro City

Level	2008	2009		2010		2011	
	No.	No.	Increase/ Decrease	No.	Increase/ Decrease	No.	Increase/ Decrease
Public							
Elementary	73,040	74,269	1,229	76,523	2,254	79,368	2,845
Secondary	30,221	28,854	-1,367	28,989	-135	29,714	725
Tertiary	42,238	44,314	2,076	47,608	3,294	41,939	-5,669

Table 3.28
Projected Classroom, Teacher Requirements in
Public Schools by Level
Cagayan de Oro City

Level	Planning Period									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Projected Enrolment										
Elementary	84,202	86,728	89,329	92,009	94,770	97,613	100,541	103,557	106,664	109,864
Secondary	32,760	34,398	36,118	37,923	39,923	41,811	43,901	46,096	48,401	50,821
Projected Classroom Needs										
Elementary	70	72	74	77	79	81	84	86	89	91
Secondary	39	41	43	45	47	50	52	55	58	61
Projected Teachers Needs										
Elementary	70	72	74	77	79	81	84	86	89	91
Secondary	0	32	43	45	47	50	52	55	58	61

Table 3.29
Historical Enrollment Participation Rate for the Last 5 Years
Cagayan de Oro City

Year	Enrolment Participation Rate	
	Elementary	Secondary
2008-2009	101.30%	59.71%
2009-2010	99.10%	56.24%
2010-2011	98.29%	56.74%
2011-2012	97.42%	56.23%

Development Needs and Future Requirements

Elementary and Secondary Level

The challenge now is to produce quality pupils/students through quality education in accordance with the DepEd Thrust and Programs. The department is comprehensively preparing and evaluating the five crucial

resources namely; Teachers, Classrooms, Furniture, Textbooks and Toilets to enhance basic quality services.

Table 3.30
Crucial Needs and Future Requirements
Elementary and Secondary Level

Resources	Crucial Needs and Future Requirements			
	2012		2013	
	Elem.	Sec.	Elem.	Sec.
Teacher	599	421	681	471
Classroom	311	93	350	110
Furniture	16,024	1000	18,212	257
Textbook	178,739	25,301	234,001	23,792
Toilet	193	234	216	256

Source: DepEd_City Division

Higher Education

Based on the baseline data, the projection of enrollment in the tertiary level in Cagayan de Oro City was pegged at 5% every year for the next ten years. From the figure of 49,988 enrollees in SY 2012-2013, it would reach 77,547 students in SY 2021-2022 or a difference of 27,559 students (Table 3.40).

Since there would 27,559 additional students who are projected to enroll in ten years' time, it means the following additional requirements are needed: classrooms, teachers, computers, books/references, etc. Most of these new students (about 60%) are absorbed by the private HEIs while the rest would go to the public HEIs.

Table 3.31
Projection of Enrollment in the Tertiary Level in Cagayan de Oro City
from 2013-2022

SY 2012- 2013	SY 2013- 2014	SY 2014- 2015	SY 2015- 2016	SY 2016- 2017	SY 2017- 2018	SY 2018- 2019	SY 2019- 2020	SY 2020- 2021	SY 2021- 2022
49,988	52,487	55,111	57,867	60,760	63,798	66,988	70,337	73,854	77,547

Since the private HEIs would derive these additional expenses from tuition fee increases, some parents can no longer afford to send their children to HEIs. They could not go to the public HEIs because state colleges and universities operate on certain level of budget provided by the government. They set limit as to the number of students they would take in. Some of these students not included in the cutoff point are left in the cold.

They couldn't go to local community college since there is none in Cagayan de Oro City and a moratorium of opening new schools and oversubscribed programs is still on effect.

The only possible and practical recourse is the scholarship programs offered by CHED and school-sponsored ones where poor but deserving students are given financial assistance to go through college.

Since there will be 27,599 projected additional enrollees from SY 2012-2013 to SY 2021-2022 in Cagayan de Oro City, the following are the development requirements to address that concern:

1. **Academe as the Ultimate Source of Information** – The academe does not only play the role as molders of the youth to become productive members of the society, or the training ground of the future leaders of this country, but also the ultimate source of information that affects society – climate change and reduction of disaster risks. Therefore, it is a major stakeholder and a source of information that would help decision makers in charting the course of nation for survival and sustainable development. The academe, for example, has a greater part to play in identifying possible occurrence of disasters to enable everybody to prepare and implement mitigating measures, and scientific discoveries and breakthroughs as far as climate change and reduction of disaster risks are concerned. This will ensure that enrolment and graduates statistics wouldn't be affected because of the occurrence of disasters and negative effects of climate change.
2. **Quality Tertiary Education** – CHED has to intensify in the implementation of its mandate – ensure the attainment of Quality Tertiary Education – by religiously implementing its Quality Assurance functions, that of conducting monitoring and evaluation of all HEIs. This is to ensure that the aggregate collection of tuition/miscellaneous fees are channeled towards its intended purposes, i.e., 70% - increase in salaries of teaching and non-teaching personnel; 20% - improvement of laboratories, library, etc.; and 10% - financing the development activities implemented by management.
3. **Scholarship Opportunities** - The scholarship programs of CHED and schools-sponsored scholarship programs must be expanded to accommodate the new enrollees. Every year, there are only limited slots given to CHED which is in contrast with the numerous applications for scholarship and financial/educational assistance annually. Most of these applications for scholarships come from Cagayan de Oro City. This is probable because CHEDRO 10 Office is located in this City.
4. **Employability of Graduates** – The main reason why parents send their sons and daughters to college is to prepare the young for the world of

work. What is most frustrating in this case is that graduates on job hunting after graduation couldn't find jobs because the economy is maybe in bad shape and there are no jobs available, but if ever they are available, still the graduates couldn't be accepted because they don't possess the needed skills of the industry. In other words, there is mismatch of the skills of the graduates and the needs of the industry. What is ideal to happen is that the graduates should possess the basic/necessary skills like communication skills, interpersonal/human relations skills, etc., which are supposed to be learned/enhanced/developed while in school, in order to be acceptable in the industry.

5. **Hitting Two Birds With One Stone** – Alternative strategies must be adopted in order to address the identified issues and concerns. Implementing the strategy of Collaborative Scheme, for example, could solve the concerns of expanding scholarship programs and mismatch problem. This strategy is successful in other countries and has already been done here in the Philippines. In Mindanao, a maritime school in Davao has been implementing this with success for seven (7) years now. Roughly, 20% of the student population in this maritime school is in Collaborative Scheme arrangement. Basically, the organization or company, for example, would sponsor 1,000 students in a particular HEI to take technology related courses, and then hire them all when they graduate. Sponsorship sometimes means the company paying the tuition/miscellaneous fees, uniform expenses, book allowances, and a stipend. Solving the problem of limited scholarship slots and mismatch issue is not only the concern of the government but of the private sector as well.

Issues Matrix

Table 3.32
Education Issue Matrix

Technical Findings / Observation	Implications (Effects)	Policy Options / Interventions
<ul style="list-style-type: none"> ➤ Low Performance in National Achievement Test - 69.36% for Elementary - 47.40% for Secondary 	<ul style="list-style-type: none"> ➤ Decrease of the following: <ul style="list-style-type: none"> - Promotion Rate - Graduation Rate - Survival Rate ➤ Increase of the following: <ul style="list-style-type: none"> - Dropout Rate - Unemployment 	<ul style="list-style-type: none"> ➤ Implementation of the Dynamic Learning Program (DLP) in 36 public secondary schools. ➤ Intensive NAT Review Program in all public schools both elementary and secondary. ➤ Provide instructional materials and ICT ➤ Strict implementation of approved City Ordinance concerning the operation of Internet Café.

<ul style="list-style-type: none"> ➤ High Drop-out Rate in public secondary level (4.94%). ➤ Inadequate school buildings 	<ul style="list-style-type: none"> ➤ Increasing number of OSYs/OSAs ➤ High Incidence of early pregnancy /marriage ➤ Low pupil/student performance. 	<ul style="list-style-type: none"> ➤ Year-round feeding program ➤ Improve access roads linking residential area to school ➤ Provide comprehensive program for OSYs through ALS. ➤ Increase budget allocation for classroom construction
<ul style="list-style-type: none"> ➤ No school site ➤ Untitled School Site Title / Ownership 	<ul style="list-style-type: none"> ➤ Low pupil/student performance. - Overcrowded classrooms - Limited space for additional buildings ➤ School children are deprived to good quality education ➤ Vulnerable to squatters ➤ Stakeholders are hesitant to donate classrooms 	<ul style="list-style-type: none"> ➤ Adopt emergency classes. ➤ LGU allocate budget for school site acquisition. ➤ Construct progressive type buildings. ➤ Implement the School Titling Program of the department including school sites own by the City Government.

Table 3.33
Vulnerability Analysis on Flooding (Elementary and Secondary Level)
Cagayan de Oro City

Location	VULNERABILITY (Exposure-Sensitivity-Adaptive Capacity)											
	Human						Property			Operational		
	Children / Youth (Enrolment)	Elderlies (Teachers / School Head)	PWD	Women	IPs	Disability	Senior Citizen Center	Livelihood Center	Classrooms	Disaster Preparedness	Social Services	
Elementary												
Bonbon ES	1417	30							17			
Balulang ES	1865	33							27			
Macanhan ES	1632	39							22			
Canitoan-an ES	805	18							16			
Iponan ES	1546	31							19			
Pagatpat ES	628	15							12			
North City CS	1616	37							31			

Consolacion ES	1753	35							33			
Secondary												
Angeles Sisters NHS	719	27							15			
Cagayan de Oro NHS - Balulang Annex	760	18							4			
Iponan NHS	970	27							16			
Bulua NHS	2166	63							40			
Carmen NHS	1537	55							36			
Bonbon NHS	113	4							0			

Table 3.34
Vulnerability Analysis on Flooding (Tertiary Level)
Cagayan de Oro City

Location	VULNERABILITY (Exposure-Sensitivity-Adaptive Capacity)							
	Human					Property		
	Students	HEI Staff	PWD	Women	IPs	HEI	Senior Citizen	Livelihood
							Center	Center
Barangay Carmen						1. Golden		
						Heritage		
						Polytechnic		
						College		
Liceo de Cagayan								
University	24	136						
Barangay Lapanan						2. Mindanao		
						University		
						of Science		
						& Technology		
Barangay 19								
Pilgrim Christian								
College	35	42						

Table 3.35
CCA + DRR Connectivity on Education (Elementary and Secondary)

Cagayan de Oro City

INDICATORS	CCA+DRR CONNECTIVITY		
	What is the impact/effect of the indicator in attaining climate resiliency/reduction of disaster risks?	What is the impact/effect of changing climate and the occurrence of disaster to the local development?	Policy Options / Interventions
Increase on Achievement Rate to 80.0%	Increase in achievement rate may increase number of people with higher thinking skills that can response to emergency situation.	People with higher thinking have higher environmental consciousness.	Rigid NAT Review Promote mentoring activities Activate peer coaching Organize varied academic clubs
Increase Completion Rate to 81.04%	Increase in completion rate, survival rate and participation rate may increase also the number of people with higher capability and confidence.	People with higher learning may also have higher environmental consciousness.	Conduct of LAC sessions Conduct of different academic and non-academic competitions Quarterly recognition of pupils with best attendance
Increase Survival Rate to 84.67%			
Increase Participation Rate to 98%			
Decrease Dropout Rate to 0%	Decrease of dropout rate may reduce also the number of casualties/victims of disaster.	Decrease of dropout rate may result to the increase of number of people with capability to handle emergency cases.	Supplemental Feeding Program Enhance health and nutrition programs

Table 3.36
CCA + DRR Connectivity on Education (Tertiary Level)
Cagayan de Oro City

ELEMENT: PEOPLE

DESCRIPTION: RESILIENT and GOD-CENTERED

SUB-SECTOR: HIGHER EDUCATION

Indicator	CCA+DRR CONNECTIVITY
-----------	----------------------

	What is the impact/effect of the Indicator in attaining climate resiliency/reduction of disaster risks?	What is the impact/effect of changing climate and the occurrence of disaster to the local development
Enrollment in the Tertiary Level	Students are given the chance to be well-informed and given orientation on how to attain climate resiliency/reduction of disaster risks being part of the curriculum and human resource development activities	Students would realize the reality of changing climate and the occurrence of disaster and the need to do something about them in their own way in terms of prevention, adaptation, preparedness and civic consciousness.
Graduates from College	The education system has not only produced professionals but also matured individuals who would work towards attaining climate resiliency/reduction of disaster risks.	The graduates would now be part of the world of work and contribute not only towards economic but also sustainable development.

3.4 Protective Services

Situational Analysis

Philippine National Police - Cagayan de Oro City Police Office

The peace and order situation of the City of Cagayan is generally stable same with other adjacent towns. The presence of military camps, business sectors who are responding by investing to the booming City and other protective services partners are in a high level of optimism that their work contributes to the progress and development of the City.

The **Cagayan de Oro City Police Office** (COCPO) has a total strength of 748 uniformed personnel, of which 45 are Police Commissioned Officers and 703 are Police Non-commission Officers, serving a total civilian population of 634,873 (2012 Projected Population). It has an approximate police-to-population ratio of 1:935 which is within the minimum standard police to population ratio of 1:1000. As of now, there are only 405 policemen assigned in the field to 10 different police stations in the city namely: Divisoria, Cogon, Agora, Carmen, Macabalan, Puerto, Bulua, Lumbia, Macasandig and Cugman. In spite of this, COCPO ably performs its police duties and effectively respond to crime incidence by employing pre-emptive measures through intensified conduct of saturation drives and finding other solution strategies. Such measures greatly deterred criminals and other lawless elements to freely conduct their nefarious activities. In fact, crime rate in the city has decreased from 0.78 in 2010 to 0.61 in 2011.

Also, the presence of BPATS (Tanods, Barangay Police) in each barangays contributed a lot in maintaining peace and order in their respective barangay with a total strength of 1,364 in the entire city. They are the force multipliers of COCPO and the first responder when crime occurs in the barangay sufficient enough to respond immediately to the protective service needs of the residents.

The Crime Rate Incidence in the City has decreased from 0.78 percent in 2010 to 0.61 percent in 2011. The crime prone barangays are Puerto, Carmen, Macabalan, Macasandig, Cugman, Bugo, Bulua, Nazareth, Puntod, Tablon, Lapasan and Lumbia. Area of Responsibility (AOR) of Police Station 1 and Police Station 2 recorded sporadic and numerous crime incidents and were concentrated in populated barangays. Most were perpetrated in Barangays 5 and 8 of Police Station 1 Area of Responsibility and Barangays 31 and 33 of Police Station 2.

Figure 3.11 disclosed that the most prevalent index crimes committed are theft, which is 63% of the total index crimes (7,587) and 43% of the total crime volume(10,979); physical injuries 18% of the total index and 13% of the total crime volume; and robbery, comprising 13% of the index crime and 9% of the crime volume. Prevailing non-index crimes are cases against the protection of women (averaging 23% on the total non-index), grave threats (13%), and protection against children (10%). While other non-index crimes are only 4% of the total crime volume.

COCPO recognizes the following needs that are vital in keeping Cagayan de Oro a safe and secured place to live:

- a. Inadequate number of trained police personnel who will be assigned in the field for police visibility.
- b. Insufficient equipment and facilities which are very vital in the day to day police work such as patrol cars, firearms, handheld radios, and other modern scientific and forensic investigation equipment which the other country are using today. Each Police Station has only one patrol car, out of the 748 personnel 58 of them has no issued firearms and only 161 personnel have issued handheld radios.
- c. No rescue equipment - limited rescue mission during flashflood and other calamities.
- d. Outposts

Bureau of Fire Protection

The **Central Fire Station** (CFS) in the city is located in a very congested area (*renting a place*) which hampers their activities thus delayed response happened in time of emergency call for assistance and spread of fire is not easily contained. It has 11 sub-fire stations located in the following barangays: Bugo, Puerto, Tablon, Lapasan, Macabalan, Kauswagan, Bulua, Carmen, Balulang, Macasandig, and Nazareth.

As of now, the CFS has only 106 personnel though the ideal fireman to population ratio is 1:2,000 this means there is insufficient number of firefighters. The firefighting facilities are also inadequate; only 3 units rescue trucks exclusively assigned at the Central Fire Station and 12 units pumpers to different fire sub-station (1 pumper in every fire sub-station). Along with this, series of firefighting trainings is relevant to the newly hired firefighters to ensure not only the safety of the lives of people and property but for their own protection.

Despite of the limitations, fire incidents in Cagayan de Oro has reduced by 25% from 56 fire incidents in 2009 to 42 fire incidents in 2010 and in 2011. This achievement is being complemented by the continuous support from the active private/business sectors in our city so with the assistance from our trained Barangay Fire Volunteer Brigade.

Bureau of Jail Management and Penology

For the jail management, the **BJMP** is strategically located at Barangay Lumbia this city. The City Jails are both male and female dormitories. It detains almost half of the total population of inmates regionwide. Both the male and female dormitories are now facing congestion problem. Presently, CDOJ-MD occupies a lot area of 18,632 sq. m. with a floor area of 5,159.05 sq. m. and has only a cell area of 1,226.58 sq. m. with the ideal capacity of 934 inmates from the ideal capacity. However, at present it caters 1,148 inmates or it exceeds about 214 inmates from the ideal capacity or 22.9% congested.

The standard ratio of personnel to inmates is 1:7 or one custodial personnel as to 7 inmates. However, at present this Jail has only 74 personnel manning 1,148 inmates or the present ratio is 1:15.5 which means there should be at least 80 additional personnel to meet the required standards set by the United Nations to uplift the living condition of inmates while they are incarcerated.

On the other hand, the female dorm comprises a lot area of 2,184 sq. m. with a floor area of 907.08 sq. m. and has only a cell area of 314.72 sq. m. to cater the ideal capacity of 92 inmates. As of this date, the jail houses 109 inmates which means it exceeds about 17 inmates from its ideal capacity or 18.48% congested.

The rate of congestion is increasing rapidly which might cause adverse condition to inmates like health problems due to climate change (*cells in jails are not well ventilated*). Consequently, there is a great and urgent need of additional jail buildings in City Jail Stations so that health and living condition of inmates will be protected while they are still behind bars.

Both City Jails have spacious areas more than enough for the constructions of additional double-the-size of the existing jail buildings since at present the area is 18,632 sq. m. and 2,184 sq. m. respectively.

**PROTECTIVE SERVICES MAP
CAGAYAN DE ORO CITY**

LEGEND:

- NATIONAL ROADS
- RIVERS AND CREEKS
- BARANGAY BOUNDARY

Agencies

- POLICE PRECINCT
- FIRE STATION

INDEX MAP

DATA SOURCE:
Is Image 1982, City Measurement Department,
City Planning and Development Office

PHILIPPINE REFERENCE SYSTEM 1982

NOTES:
The accuracy of the information displayed,
however, no warranty or liability is implied.

Existing and Development Needs

Both national/local governments should allocate additional budget for protective services sector thereby giving support to enhance/ improve their efficiency/capability of safeguarding the lives of people and properties.

- a. There is a pressing need to recruit additional qualified personnel for COCPO - 122 qualified personnel every year to reach the ideal police to population ratio of 1:500 in the year 2022 with projected population of 827,600. This is also to replace those who are dismissed from the service due to AWOL, resigned, retired compulsory or optional.
- b. Employ ten (10) additional trained firefighting personnel every year starting year 2013 to attain the ideal population ratio of 1: 2,000.
- c. At least 80 additional personnel should be added to meet the required standard ratio of Jail personnel as to the present number of inmates housed in both City Jails. Increased number of jail personnel will improve the security control and prevent inmates to escape/mass escape and harassment to authority and visitors.
- d. Procurement/acquisition of High Tech/modern protective services equipment and facilities such as:

Patrol Cars - Currently our Police Station has only 1 patrol car, in case of incidents, police station cannot respond immediately. At least 3 patrol cars per Police Station.

Firefighting facilities/equipment and fire trucks – if possible 1 truck in a year replacing the non-serviceable equipment

Firearms – Fill-up the lacking 58 of the 748 personnel of COCPO who has no issued firearms which is the main equipment of a Police.

Handheld Radios – 161 of the 748 personnel of COCPO has issued handheld radio. Procure 51 handheld radios per year for the duration of ten years to have a 90% issuance of handheld radio because 90% of our personnel are assigned in the field.

Rescue Equipment – procurement of Utility Rope, Rope accessories, Search Light, Flash Lights, Life jackets, Rescue Hovercraft in coordination with the PNP and the local government which could have an effective operational maneuverability in all rescue operations instead of Rescue Rubber boat, where it can be used all year round by police officers along coastlines and rivers in shallow water conditions, from water to land, over mudflats, marshes, beach areas, muddy or sandy shorelines.

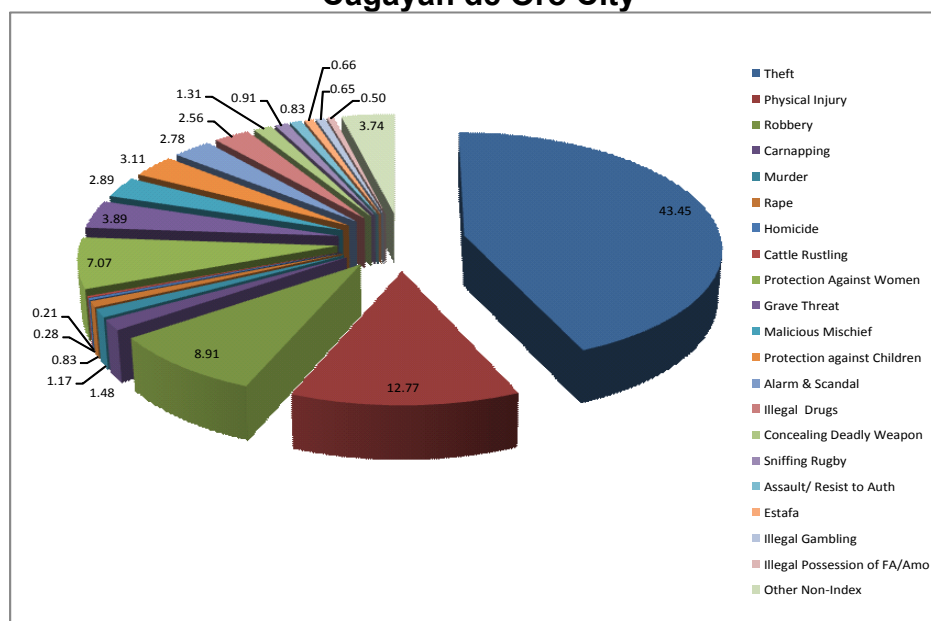
- e. Procurement of Modern Scientific and Forensic Investigation Equipment as an effective tool in solving crimes such as Automated Fingerprint Identification System (AFIS), Modern DNA Machine, Installation of CCTV Cameras in strategic areas as crime/incidents monitoring tool. High crime/incidents solution and other protective services support will improve the efficiency of safeguarding the lives of people.
- f. There is a need to transfer the Central Fire Station Office to a strategic location which is not congested so that maximum services can readily be available to the needing public.
- g. There is a great and urgent need to construct additional and separate jail buildings (*with complete facilities*) for men, women, and children in conflict with the law.
- h. Intensify information and education campaign on Disaster Preparedness Seminars. Well informed barangay constituents will decrease the casualties and resistant to the impact of disaster and climate change.
- i. Conduct Barangay Fire Volunteer Brigade seminars in barangay level. More trained barangay volunteers will help out the reduction of casualties when there is fire incidents.

Table 3.37
Protective Services Issue Matrix

Technical Findings/Observations	Implications/Effects	Policy Options/Interventions
COCPO		
Inadequate Police Personnel in the field for police visibility	Increase in crime rate	Recruit qualified individual
Inadequate patrol cars	Police Station cannot respond immediately for police assistance, there will be delayed response to incidents	Procure additional patrol cars for each Police Station
Inadequate Police equipment	Personnel are vulnerable to danger	Procure the lacking police equipment
No rescue equipment	Limited rescue mission during flashflood and other calamities	Procure the rescue equipment
Inadequate scientific and forensic equipment	Low crime solution efficiency due to lack	Procure the lacking Scientific and Forensic

	of technological support in investigation	Equipment and conduct seminar on the use of the said equipment
BFP – CFS		
Lack of firemen	Spread of fire is not easily contained	Recruitment of additional trained fire fighters
		Conduct Fire Volunteer Brigade training seminars (Barangay level)
Lack firefighting facilities	Spread of fire is not easily contained	Acquisition of additional firefighting facilities
Central Fire Station located in a very congested area (renting the place)	Delayed response to emergency call	Coordinate with the LGU to provide the area/lot for the establishment and construction of new Central Fire Station
BJMP		
Lack of jail buildings/ facilities	Jail congestion results to sickness/ Illness of inmates	Additional constructions of jail buildings with complete facilities
Lack of jail personnel	Deterioration of security control which results to escape or mass escape and harassment to authority and Visitors	Allocation of additional budget for recruitment/hiring of 80 additional BJMP personnel

Figure 3.17
Distribution of Crimes by type, 2009-2011
Cagayan de Oro City



Source: COCPO

Table 3.38
Crime Incidence by Type, By Sex of Offender, CY 2009-2011
Cagayan de Oro City

		2009		2010		2011		TOTAL			%Crime Distribution
		Male	Female	Male	Female	Male	Female	Male	Female	Total	
INDEX CRIMES	TYPE OF CRIMES										
	Theft	639	80	1965	143	1819	125	4423	348	4771	43.45
	Physical Injury	439	27	527	34	351	24	1317	85	1402	12.77
	Robbery	210	0	521	6	240	1	971	7	978	8.91
	Carnapping	21	3	96	0	41	1	158	4	162	1.48
	Murder	33	2	43	1	50	0	126	3	129	1.17
	Rape	29	0	30	0	32	0	91	0	91	0.83
	Homicide	7	1	13	0	10	0	30	1	31	0.28
	Cattle Rustling	6	0	9	0	8	0	23	0	23	0.21

M ES											
	Grave Threat	188	26	115	14	80	4	383	44	427	3.89
	Malicious Mischief	61	6	138	7	101	4	300	17	317	2.89
	Protection against Children	91	12	112	30	85	12	288	54	342	3.11
	Alarm & Scandal	51	3	148	5	93	5	292	13	305	2.78
	Illegal Drugs	60	5	69	7	131	9	260	21	281	2.56
	Concealing Deadly Weapon	29	1	56	0	57	1	142	2	144	1.31
	Sniffing Rugby	45	0	27	1	26	1	98	2	100	0.91
	Assault/ Resist to Auth	27	2	25	2	32	3	84	7	91	0.83
	Estafa	17	5	21	3	24	3	62	11	73	0.66
	Illegal Gambling	11	4	17	2	36	1	64	7	71	0.65
	Illegal Possession of Firearms/Ammunition	14	0	13	0	28	0	55	0	55	0.50
	Other Non-Index	113	25	138	26	99	9	350	60	410	3.74
		879	90	1241	102	1027	53	3147	245	3392	30.90
	Total non-index crimes	969		1343		1080		3392			
		2263	203	4445	286	3578	204	10286	693		
	TOTAL	2466		4731		3782		10979			100

Source: COCPO

Table 3.39
Current and Projected Requirement for Police and Firemen
Cagayan de Oro City

Year	Projected Population	Police Force Requirement	Firemen Requirement
2012	634,873	635	317
2013	651,197	652	326
2014	669,443	669	335
2015	687,427	687	344
2016	705,895	706	353
2017	724,859	725	362
2022	827,600	827	414

Source: COCPO, BFP

Ideal Police Population Ratio: 1:500 Minimum Standard Police Population Ratio: 1:1000

Fire Truck to Population Ratio: 1:28000

Ideal BFP Personnel to Population Ratio: 1:2000

Fire Truck to Fireman Ratio: 1:14

Table 3.40
CCA+DRR Connectivity for Protective Services

Indicators	CCA + DRR CONNECTIVITY		
	What is the impact/effect of the indicator in attaining climate resiliency/reduction of disaster risks?	What is the impact/effect of changing climate and occurrence of disaster to the local development?	Policy Options/ Interventions

<p>All Barangay constituents are trained in Disaster preparedness</p> <p>Increase number of trained Barangay Fire Volunteer Brigade</p>	<p>Well informed Barangay constituents will decrease the casualties and resistant to the impact of disaster and climate change.</p> <p>Trained fire volunteer brigade will help out in the reduction of casualties during fire incidents</p>	<p>LGU should be the lead agency to educate Barangay constituents on Disaster preparedness and to promote the spirit of volunteerism.</p>	<p>Intensify information and education campaign on Disaster Preparedness.</p> <p>Link with different lines agencies, Civil societies in the conduct of trainings.</p>
<p>Increase number of policemen, trained fire fighters and jail personnel</p>	<p>Sustained police visibility in the area will prevent criminals to commit crimes.</p> <p>Well trained fire fighters will ensure the safety of the lives of people and property.</p> <p>Improved security control will prevent inmates to escape/ mass escape and harassment to authority and visitors.</p>	<p>Increase in budget allocation in the local government as well as in the National level.</p>	<p>Local and National government should allocate additional budget for the recruitment of qualified protective service personnel.</p>
<p>High Tech/modern protective services equipment and facilities</p>	<p>High crime/incidents solution and other protective services support will improve the efficiency of safeguarding the lives of people and properties.</p>	<p>Increase in budget allocation in order to attain high efficiency rate in providing protective services to its constituents.</p>	<p>Local and National government should allocate additional budget for the acquisition/procurement of High Tech/modern protective services equipment and facilities (patrol cars, rescue equipment, modern & scientific forensic equipment, firefighting facilities, fire trucks, firearms, handheld radios)</p>
<p>High Standard protective services</p>	<p>High efficiency rate in job performance</p>	<p>Demand of land for protective services</p>	<p>LGU to identify/negotiate</p>

headquarters; buildings	jail	Improved health condition of inmates Decrease congestion rate in jail	headquarters	land for the establishment and construction of Standard protective services headquarters.
----------------------------	------	---	--------------	--

3.5 Sports and Recreation

Situational Analysis

The City Government of Cagayan de Oro has its City–Wide Sports Development Program and it has 11 major events financially subsidized by the city namely; Basketball, Volleyball, Table Tennis, Sepak Takraw, Athletic, Karatedo, Badminton, Arnis, Chess, Taekwondo, Boxing and other sports related activities. Under this program, group of competent coaches and trainers called Advance Scientific System Efficiency Training (ASSET) was organized. They have to coach and train young players on sports discipline anchored in the vision and goals of the city sports development program.

This Sports Program had already been serving aspirants athlete's to excel and explore in different sports competition in national and international level. In fact, it offered not only great opportunity for young people to develop and enhance their skills in sports but also financial assistance and incentives to those who contributed honors in the name of the city.

Despite of much success in different sports competition, there are challenging issues and concerns encountered in facilitating sports program like: inadequate sports equipment/training facilities to different sports discipline; the inappropriate sports venue/area which is not safe to every trainee and the inadequate auxiliary facilities in most barangay sports venue resulting to the reduction of number of participants to engage in sports activities.

Though, the City has various existing private sports and recreational facilities, the government have to spend money in order to facilitate sports events in a proper venue. At present, the city has adequate modern sports facilities that can compete with other cities. The presence of modern sports zones/complex for active sports; golf course; commercial recreation like shopping malls, movie houses, best accommodations; beaches/resorts; captivating tourist spots and beautiful parks are available and accessible not only to people in Cagayan de Oro but also to the sports enthusiasts from the adjacent towns.

For sports facilities, Table 3.53 shows that 54% (43) of the total number of barangays in Cagayan de Oro has its own multipurpose covered courts which

are generally used for outdoor sports activities such as basketball, volleyball, lawn tennis, table tennis and etc. Majority of them are in good conditions physically, but the availability of auxiliary facilities like toilets, benches, lightings and etc, are most likely inadequate/ lacking if to include. Moreover, these are utilized as emergency action centers/evacuation centers during calamities and disaster thus sports and other socio-economic activities are being hampered. While, the remaining 46% or 37 Poblacion Barangays has no outdoor sports facilities because of its location; in fact, some of them are utilizing the concrete roads for their sports activities.

On the other hand, public schools in Cagayan de Oro have signified their active participation in sports development program. The Department of Education Culture and Sports Development Program had organized a school varsity type of athletes in every school. There are seven sports events conducted annually: District Meet, Division Meet, Regional Meet, Palarong Pambansa, COAA Meet, Milo Olympics which are locally funded under the SEF Funds and School Intramurals funded by the school and PTA. In three consecutive school years, the varsity players have been awarded as consistent over-all-champion in the Northern Mindanao Regional Athletic Meet.

Existing Development Needs

The inappropriate setting and insufficient auxiliary facilities in every sports venue are the most important concerns in sports development program. In the same way, utilizing barangay sports facility as emergency/evacuation center will hamper the sports activities/affairs/program that is intended for the benefits of its constituents. With this prevailing necessity, the city government should immediately provide a temporary shelter for calamity/disaster victims; allocate budget/funding support in order to establish/construct a highly safe and friendly sports venue and recreational facilities with good ambiance for the well-being and interests of the people so that health condition and adaptive capacity of players/enthusiasts will improved; and it will also provide a good learning process for players to develop his/her skills in sports. Furthermore, it is also vital to upgrade the existing barangay sports facilities (including auxiliary facilities) to make it more sports friendly environment that will inspire people to be sports-minded especially the youth in the community.

Having a **Cagayan de Oro Sports Dome** is essential to carry on the declined sports program in the city. The design is under the standard requirements which accommodate different sports disciplined where sports and recreation venues are also located. A built in modern and safe structure with complete auxiliary facilities and sports clinic that are accessible to the people.

Table 3.41
Sports and Recreation Issue Matrix

TECHNICAL FINDINGS/OBSERVATIONS	IMPLICATION (EFFECTS)	POLICY OPTIONS/INTERVENTIONS
The need of appropriate venue in Sports activity	Inappropriateness of venue will affect the learning process of the players to develop his/her skill in sports.	Identify and establish potential areas that suit to provide good ambiance in sports development.
Inadequate of sports equipment to different sports disciplined.	Declination of number of participants to engage in sports activities and the decrease of the performance rate to every player.	Provide sports equipment to motivate the players to develop their skills in sports.
Inadequate of auxiliary facility to different areas in sports venue	Inconvenience to some part of players.	The need to develop auxiliary facilities in some areas in sports venue.
The lack of sports first aid clinic	Serious physical injuries may threaten life of the players due to the absence of the clinic	The need to construct first aid clinic in all areas in sports venue.

Table 3.42
CCA + DRR Connectivity for Sports and Recreation

INDICATORS	CCA + DRR CONNECTIVITY		
	What is the impact/effect of the indicator in attaining climate resiliency/reduction of disaster risks?	What is the impact/effect of changing climate and occurrence of disaster to the local	Policy Options/ Interventions

54% Barangays have covered courts • Sports conducted	Barangay covered courts are utilized as emergency action center/ evacuation center in times of calamities and disaster.	development? Sports activities and other socio-economic activities may be hampered.	LGU to immediately provide temporary shelter for calamity/disaster victims. Link with different line agencies, civil societies, religious sector re: possible assistance to disaster/calamity victims.
Highly safe/friendly sports venue and recreational facilities	Highly safe/friendly sports venue and recreational facilities will provide good learning process of players to develop his/her skills in sports. Engaging Sports activities will improved health condition and adaptive capacity of players	Demand of land for sports and recreational facilities. Allocation of additional budget	LGU to identify and establish good sports venue and recreational facilities. LGU to allocate funding for the establishment and construction of Sports Dome. Seek funding assistance from Senatorial, Congressional Offices re: establishment and construction of Sports Dome. Close coordination between DepEd and LGU re: regular allocation of budget for school Sports Development Program.

Table 3.43
Vulnerability on Sports and Recreation

Location	VULNERABILITY (Exposure – sensitivity-Adaptive Capacity)									
	Human	Property	Operation							Nat'l Environment

	No. of Families affected	No. of Family members	Totally Washed out	Partially Damaged	Flooded	After								
Iponan					Soft-ball Field									
					Plaza/ Park									
Carmen					Covered court									

3.6 Social Welfare

Situational Analysis

The City has five (5) District offices which cater to the needs of the needy residents of the eighty (80) barangays, to wit:

- District I - based at Barangay Kauswagan covering the barangays of Carmen, Balulang, Patag, Bayabas, Bonbon, Iponan, Bulua, Pagatpat, San Simon, Baikingon, and Canitoan.
- District II - based at Barangay Lumbia covering the barangays of Bayanga, Mambuaya, Dansolihon, Tignapoloan, Tagpangi, Pagalungan, Pigsag-an, Taglimao, Tuburan, Tumpagon and Besigan.
- District III - based at Barangay Consolacion covering barangay Nos. 7 to 29, Puntod and Macabalan.

- District IV - based at Barangay Lapasan covering the barangays of Gusa, Tablon, Agusan, FS Catanico, Balubal, Puerto and Bugo.
- District V - based at Barangay Nazareth covering the barangays of Macasandig, Camaman-an, Indahag, Barangay Nos. 1 to 6 and 30 to 40.

Each district office has only 4 direct service workers who cover 15 lowland barangays and 4 to 5 highland barangays.

The following are the social welfare facilities;

- 146 Day Care Centers in 19 barangays of District I and 22 barangays of District II
- Tahanan Ng Kabataan - for minor offenders
- Social Development Center - for sexually and physically abused, (Female – below 18 years old) abandoned and neglected children (Male – below 6 years old)
- Boys' Town of CDO - for street children, abandoned, maltreated (male below 18 years old) and abused
- Residential Care for Elderly - for abandoned and unattached elderly
- Temporary Shelter for - for abandoned mentally challenged
- Women Center - for battered and abused women (temporarily closed)

The above-mentioned facilities are functional but needs to be repaired in order to serve its purpose. Women Center is temporarily closed because of lot acquisition problem.

Existing welfare organizations are Day Care Parents Association, Pag-asa Youth Association, Senior Citizens Association, PWDs' Organization and Women Association, all are functional.

The Office of the Senior Citizens Affairs (OSCA) is taken care of by some senior citizens/retirees who volunteer themselves to assist in the issuance of ID's and processing of burial assistance of their co-senior citizens considering that there is an increasing number of deaths among senior citizens.

The occurrence of TS Sendong in the city affected 20,088 families whose properties were also devastated by the flooding. Other sectors affected included children (6,977), youth (1,650), elderlies (485) and persons with disabilities (268). Affected families whose houses were flooded or washed-out were temporarily relocated to assigned evacuation centers. The victims were given food, clothing, health assistance and de-briefing sessions to

manage the trauma that they have experienced during the onset of flooding and also dealing with the loss of properties and relatives.

Affected population was higher in Barangays 7, 13, 17, 21 and Consolacion with more than 75 percent of its total population. During the occurrence of TS Sendong, the CSWDO reported a total of 388 deaths, 386 missing, 202 injured and 20,088 affected families. Deaths and missing persons were recorded in badly hit areas such as Sitio Cala-Cala and Tibasak in Macasandig, Balulang, Macanhan in Carmen, Isla de Oro, Isla Delta, Isla Bugnaw and Consolacion.

[illegible]

Existing and Development Needs:

<ul style="list-style-type: none"> • Day Care Centers • Vehicle • Creation of another District Office • A space/room for interview and counseling • Conference Room • Upgrading of positions of employees especially those who are in service for 15 years and above • Centers perimeter fence • Service vehicle for center wards • Handheld radio during disaster • Camera for documentation • Telephone • Hazard pay for personnel • Computer set per district office • LCD projector with laptop/notebook and printer • Travelling allowance for CSWD implementers and monitoring. 	<ul style="list-style-type: none"> - Partially damaged need to be repaired - Totally damaged need for another construction in a safe place - Delayed action/intervention in case of disaster - To be used during disaster
--	---

Out of 58 regular employees of CSWD, they have only one (1) Social Welfare Officer IV and five (5) SWDO 1. In addition, the City hired one (1) Job Order SWDO 1. The City needs to hire additional Social Welfare Officer to come up on the standard Social Welfare and Development service delivery system in the LGU.

Standards on Social Welfare and Development Service Delivery System in the LGU Staffing:

1. Per District Office
 - 1 - Social Welfare Officer III
 - 1 - Social Welfare Officer II
 - 1 - Social Welfare Officer I
 - 4 - Social Welfare Assistants
2. Per Center/Institution
 - 1 - Social Welfare Officer III
 - 1 - Social Welfare Officer II

- 1 - Center Head
- 1 - Social Welfare Assistant
- 20 - House parents (shifting)
- 1 - Clerk
- 5 - Security Guards

Table 3.44
Social Welfare Services Analysis Matrix

Technical Findings	Implications/effects	Policy Options/Interventions
<u>Day Care Program</u>		
Space/Area of Day Care Center	<ul style="list-style-type: none"> Center is not conducive to learning 	<ul style="list-style-type: none"> Require Barangay Council to allocate area for Day Care Center as mandated in RA 6972
<u>Elderly</u>		
Absence of Senior Citizen Care Center	<ul style="list-style-type: none"> Unmet senior citizens' need for socialization and more active community involvement Senior citizen not updated on their rights and privileges 	<ul style="list-style-type: none"> Establishment of Day Center for Senior Citizen per barangay per RA 7876
<u>Persons/Children with Disabilities</u>		
PWDs/CWDs		
1. Training Center for PWDs/Vocational Rehabilitation Center and Development	<ul style="list-style-type: none"> Less knowledge Has skills but cannot be applied 	<ul style="list-style-type: none"> Hire trainers for training of sign language and vocational projects
2. Social Laboratory for Resource for Children with Disabilities with complete facilities (Chairs, tables, cabinet for toys, learning materials and qualified teacher	<ul style="list-style-type: none"> No center for trainings of children and parents with disabilities 	<ul style="list-style-type: none"> Of a Center for Social-Resource Center for CWDs providing arts & crafts, pre-vocational & pre-academics & meetings for parents of CWDs

3. Lack of home for Mentally Challenged person		<ul style="list-style-type: none"> Establish/construction of home for the mentally challenged
<u>Victims of Natural and Human-made Disaster</u>		
1. Lack of Evacuation Center for flood prone barangays	<ul style="list-style-type: none"> Victims not properly attended and accounted for School classes are hampered/affected as schools are used for temporary evacuation center Facilities inside classroom are damaged 	<ul style="list-style-type: none"> Requires flood prone barangays to establish or identify evacuation center Activate Barangay Disaster Risk Reduction and Management Committee Conduct Family and Community Disaster Preparedness Training per barangay

Table 3.45
CCA + DRR Connectivity for Social Welfare

INDICATORS	CCA + DRR CONNECTIVITY		Policy options/ Intervention
	What is the impact/effect of the indicator in attaining climate resiliency/reduction of disaster risks?	What is the impact/effect of changing climate and occurrence of disaster to the local development?	
70% of the affected children are resilient if their basic needs are met	Children are resilient if provided with normal development and some structured activities to interact with peers	<ul style="list-style-type: none"> Disaster incidence might cause psychosocial trauma to children Increase incidence might cause the displacement of families and damage to government properties/facilities 	<ul style="list-style-type: none"> Active Barangay Disaster Risk Reduction and Management Committee Conduct psychosocial processing
Increase in community awareness	Increase community awareness on Early Warning System and Communication Protocol during disaster	Disaster incidence might cause the displacement of families and damage to government properties/facilities	<ul style="list-style-type: none"> Conduct Family and Community Disaster Preparedness Training per barangay Provide evacuation

			center/area
Taking care of the vulnerable sectors	Lessen casualties/injuries of vulnerable sectors	-Establishment/ construction of Home for the vulnerable, abandoned, aged and the mentally challenged as a priority need - Structural mitigation	- Livelihood projects for PWDs/ parents of CWDs - Establish Home for the vulnerable, abandoned aged and mentally challenged persons
Skilled Day Care Workers and Direct Service Workers	Harness the skills and capacities of DCWs and DSWs in managing emergencies and disasters in their own assigned areas	Provide budget allocation for training to enhance the capability of the DCWs during emergencies and disaster	- Conduct training to enhance the capability of DCWs and DSWs in managing emergencies and disasters
Peaceful and safe community		- Can result new development - Consider the cost benefit when new structures are built	

Table 3.46
Historical Number of Population Served by Type of Clientele System
Cagayan de Oro City

Type of Clientele	Previous Year		Current Year	
	2009	2010	2011	Percentage
1. Children				
1.1 Day Care	7,410	7,505	6,689	-10.87
1.2 Children with Disability	30	64	127	98.44
1.3 Center-Based	137	134	92	-31.34
2. Youth				
2.1 Out of School Youth	250	462	625	35.28
2.2 Center-Based	48	60	66	10.00
3. Disadvantage Families	10,094	9,250	11,418	23.44
4. Disadvantage Woman	3,485	1,158	1,154	-0.35
5. Persons with Disability	200	314	285	-9.24
6. Elderly	70	28	31	10.71
7. Victims of Natural & Human-Made Disaster	23,037	6,396	16,549	158.74

Table 3.47
Social Welfare Related Projects, Approved/Funded for Implementation, 2010

Name of project	Location	Type	Proponent (Gov't. private, Other)	Estimated Start Date	Estimated date of Completion
1. Self-Employment Assistance-Kaunlaran	8 brgys. With 16 organized groups	Livelihood& capability building component	Low income/insufficient income facilities	Feb. 2011	Feb. 2013
2. Early Childhood Care Development	53 Barangays with 177 Day care Centers	Health, Psychosocial and mental Development of 0-6 years old Child	Children of Low Income Families parents are both working	Yearly	Continuing
3. Social Protection	80 barangays	Counseling, Referral for Legal Services, Medical, Food Assistance, Transportation, Burial, Referral to other GOs	Indigent Families and other vulnerable sector	Yearly	Continuing
4. Relief and Rehabilitation of IDPs/Typhon Sendong Victims	46 Barangays	Shelter, Livelihood and other restorative services	IDP's at Evaluation Center at Community Based	December 2011	Continuing
5. Pantawid Pamilyang Pilipino program	5 Pilot Barangays (set I)	Poverty Reduction and Social Development	0-14 years old children to improve health status, nutrition and education	2009	2013
6. Social Pension Program for Senior Citizen	42 Barangays	Financial assistance for medical to indigent senior citizen	Indigent/no income senior citizens who are above 77 years old	2011	continuing
7. Government Internship Program	12 Barangays with organized PYAP	Livelihood Program	In-school youths/students, out-of-school, un-employed youth	Last quarter of 2011	Continuing
8. Supplemental Feeding program	53 Barangays with DCCs	-	Day Care Children enrolled at DCC	Last quarter of 2011	Continuing
9. Institutional Strengthening					

Integrated Social Sector Policy Options

Technical Findings/ Issues/ Concerns	Implications <i>If not solved</i>	Policy Options			
		Adaptation Measures		Mitigation Measures	
		Structural	Non-Structural	Structural	Non-Structural
HOUSING <ul style="list-style-type: none"> Informal settlers are occupying danger areas and/or some private properties 	<ul style="list-style-type: none"> Highly vulnerable to flooding. Loss of lives and properties which can be costly 	<ul style="list-style-type: none"> Encourage medium rise building with complete amenities and neighborhood center. 	<ul style="list-style-type: none"> Enforce National Building Code ____ (setback) and National Water Code ____ (easement) Promote Community Mortgage Program. Enactment of City Ordinance declaring no Build Zone / High risk areas Policy 	<ul style="list-style-type: none"> Construction of flood control/sea wall 	<ul style="list-style-type: none"> Activation of the City Housing Board (CHB) and its committees Provide relocation to informal settlers according to guidelines Give primary consideration to upgrade the on-site resettlements of the City Strict enforcement of laws, rules & regulations in preventing occupancy/ residency in high danger areas preferably spearheaded by barangay officials Strict enforcement of laws, rules and regulations for professional squatters and squatting

CLUP Volume 3 – The Sectoral Studies

					syndicates and penalizing local officials who are abetting/tolerating their illegal activities
<ul style="list-style-type: none"> Scarcity of affordable residential area and resettlement sites 	<ul style="list-style-type: none"> Informal settlement/ encroachment to private properties Doubled up housing Poor housing condition 			<ul style="list-style-type: none"> Medium rise building but with bigger floor area. 	<ul style="list-style-type: none"> LGU to review and update their CLUP and identify and rezone more lands for residential use. LGU to pursue land banking, initiate land conversion/ swapping, and joint venture with private and government stakeholders
<ul style="list-style-type: none"> No Build Zone 	<ul style="list-style-type: none"> Reduction of residential area Reduced risk 			<ul style="list-style-type: none"> Dredging Project of CdeO river/river control 	<ul style="list-style-type: none"> Passage of Ordinance Re: No Build Zone Convert the area into eco-tourism park or other non-residential uses Just compensation/ land swapping
<p>HEALTH</p> <p>High Maternal and Infant Mortality Rates due to the following factors:</p> <ul style="list-style-type: none"> Poor antenatal care (70%) High prevalence of home-based deliveries assisted 	<ul style="list-style-type: none"> Increased maternal deaths/mortality Increased Infant Deaths/mortality (sepsis) Increased maternal morbidity (anemia, malnutrition) 			<ul style="list-style-type: none"> Establish and sustain BEmONC areas 	<ul style="list-style-type: none"> Strengthen referral system Intensify pregnancy tracking Strengthen Birth and Emergency Plan Ensure quality Antenatal care with

CLUP Volume 3 – The Sectoral Studies

<p>by Hilots or traditional birth attendants</p> <ul style="list-style-type: none"> • Delayed referral of obstetrics and pediatric emergencies 	<ul style="list-style-type: none"> • Increased Infant Morbidity (pneumonia, meningitis, gastroenteritis) • High financial burden for hospitalization and medication • Prevalence of malnutrition among infants, children and lactating/pregnant women worsened especially during disasters 				<p>emphasis on Health Information for infants, pregnant and lactating women</p> <ul style="list-style-type: none"> • Provision of Micronutrient Supplementation • Provision of drugs and medicines for safe deliveries (to include Magnesium Sulfate and Hydralazine) • Regular conduct of Maternal Death Review to be participated in by Barangay Council and immediate family members, and the community • Passage of Ordinance regulating the activities of hilots and ensuring the safety and quality of Birthing Homes • Ensure Facility-Based Deliveries assisted by Skilled Birth Attendants (Doctor, nurse or midwife) • Expand coverage of
---	---	--	--	--	---

CLUP Volume 3 – The Sectoral Studies

					<p>immunization and micronutrient supplementation/ growth monitoring among infants and pregnant women</p> <ul style="list-style-type: none"> • Intensify essential new born care (UnangYakap) including exclusive breastfeeding • Promote proper/good nutrition and expand coverage of deworming
<p>Prevalence of lifestyle-related diseases with hypertension as the number 1 leading cause of death and increasing incidence of other leading causes of death and morbidity such as cancer, pneumonia, cerebrovascular diseases, diabetes mellitus, pulmonary tuberculosis</p>	<ul style="list-style-type: none"> • Increased morbidity and mortality among adults • Leading causes of morbidity and mortality particularly upper and lower respiratory tract infections (coughs & colds), hypertension, skin diseases and air/water borne diseases aggravate due to climate change and also during disasters/emergency situations 			<ul style="list-style-type: none"> • Provision of bicycle lane, as well as vehicle less lane in Divisoria 	<ul style="list-style-type: none"> • Intensify sports and HATAW activities in the workplace and communities and provision of physical fitness equipment in each barangay, utilizing all covered courts as fitness gym • Enforce anti-smoking policy in all places • Strengthen laboratory screening and provision of emergency and start up medicines in public health facilities particularly during disaster or emergency

CLUP Volume 3 – The Sectoral Studies

					<p>situations</p> <ul style="list-style-type: none"> • Intensify community awareness on lifestyle related diseases including early detection, stress management, promotion of good nutrition among children and adults, importance of SBE (self breast exam) and Pap smear for women and DRE (digital rectal exam for male 40 yrs. and above
<p>Prevalence of air and water-borne diseases during disasters and emergency cases such as diarrhea, leptospirosis, dengue, upper and lower respiratory tract infections, skin diseases, among others</p>	<ul style="list-style-type: none"> • High financial burden for hospitalization/ medication • Low productivity/low income due to absenteeism or loss of job due to diseases; poor learning outcomes of students due to poor health 			<ul style="list-style-type: none"> • Establish additional Microscopy centers (4 centers – additional Medtechs, equipment and supplies) 	<ul style="list-style-type: none"> • Intensify community awareness and IEC on implications of climate change and impact of disasters to health conditions of the populace • Promote Clean Air Act and other related laws on sanitation to mitigate effect of climate change • Expand enrolment of indigents in PHIC • Strengthen Barangay TB Taskforce to improve case detection, referral and as treatment partner

CLUP Volume 3 – The Sectoral Studies

					<ul style="list-style-type: none"> • Provide anti TB drugs for sputum negative X-ray positive clients • Screen all food handlers and public vehicle drivers for PTB
<ul style="list-style-type: none"> • Hazard encountered in the conduct of weighing/ OPT in open field 	<ul style="list-style-type: none"> • Conduct of OPT in open field contribute health hazard to volunteers 			<ul style="list-style-type: none"> • Establishment of weighing post and BNS physical center in all barangays. 	
<ul style="list-style-type: none"> • Insufficient incentives for BNS 	<ul style="list-style-type: none"> • Ineffective/inefficient submission of OPT 			<ul style="list-style-type: none"> • Establish Nutrition Center thru Congressional Funds 	<ul style="list-style-type: none"> • Increase BNS monthly allowance to Five Thousand Pesos (P5,000.00) per month to motivate and improve attitude of volunteer workers
<p>EDUCATION</p> <ul style="list-style-type: none"> • High Drop-out Rate in public secondary level (4.94%). • Inadequate school buildings 	<ul style="list-style-type: none"> • Increasing number of OSYs/OSAs • High Incidence of early pregnancy / marriage • Low pupil/student performance. 			<ul style="list-style-type: none"> • Improve access roads linking residential area to school 	<ul style="list-style-type: none"> • Year-round feeding program • Provide comprehensive program for OSYs through ALS. • Increase budget allocation for classroom construction

CLUP Volume 3 – The Sectoral Studies

<ul style="list-style-type: none"> No school site Untitled School Site Title / Ownership 	<ul style="list-style-type: none"> Low pupil/student performance. <ul style="list-style-type: none"> -Overcrowded classrooms - Limited space for additional buildings School children are deprived to good quality education Vulnerable to squatters Stakeholders are hesitant to donate classrooms 			<ul style="list-style-type: none"> Construct progressive type buildings. 	<ul style="list-style-type: none"> Adopt emergency classes. LGU allocate budget for school site acquisition. Implement the School Titling Program of the department including school sites own by the City Government.
PROTECTIVE SERVICES BFP-CFS <ul style="list-style-type: none"> Lack of firemen <ul style="list-style-type: none"> Lack firefighting facilities <ul style="list-style-type: none"> Central Fire Station located in a very congested area (renting the place) 	<ul style="list-style-type: none"> Spread of fire is not easily contained <ul style="list-style-type: none"> Spread of fire is not easily contained <ul style="list-style-type: none"> Delayed response to emergency call 			<ul style="list-style-type: none"> Coordinate with the LGU to provide the area/lot for the establishment and construction of new Central Fire Station 	<ul style="list-style-type: none"> Recruitment of additional trained fire fighters Conduct Fire Volunteer Brigade training seminars (Barangay level) Acquisition of additional fire fighting facilities

CLUP Volume 3 – The Sectoral Studies

<p><i>BJMP</i></p> <ul style="list-style-type: none"> • Lack of jail buildings/ facilities • Lack of jail personnel 	<ul style="list-style-type: none"> • Jail congestion results to sickness/ illness of inmates • Deterioration of security control which results to escape or mass escape and harassment to authority and Visitors 			<ul style="list-style-type: none"> • Additional construction of jail buildings with complete facilities 	<ul style="list-style-type: none"> • Allocation of additional budget for recruitment/ hiring of 80 additional BJMP personnel
<p>SPORTS AND RECREATION</p> <ul style="list-style-type: none"> • The need of appropriate venue in Sports activity 	<ul style="list-style-type: none"> • Inappropriateness of venue will affect the learning process of the players to develop his/her skill in sports. 			<ul style="list-style-type: none"> • Identify and establish potential areas that suit to provide good ambiance in sports development. 	
<ul style="list-style-type: none"> • Inadequate of auxiliary facility to different areas in sports venue 	<ul style="list-style-type: none"> • Inconvenience to some part of players. 			<ul style="list-style-type: none"> • The need to develop auxiliary facilities in some areas in sports venue. 	
<ul style="list-style-type: none"> • The lack of sports first aid clinic 	<ul style="list-style-type: none"> • Serious physical injuries may threaten life of the players due to the absence of the clinic 			<ul style="list-style-type: none"> • The need to construct first aid clinic in all areas in sports venue. 	
<p>SOCIAL WELFARE</p> <p><i>DAY CARE PROGRAM</i></p> <ul style="list-style-type: none"> • Space/Area of Day 	<ul style="list-style-type: none"> • Center is not 			<ul style="list-style-type: none"> • Require Barangay 	

CLUP Volume 3 – The Sectoral Studies

Care Center	conducive to learning			Council to allocate area for Day Care Center as mandated in RA 6972	
ELDERLY Absence of Senior Citizen Care Center	<ul style="list-style-type: none"> • Unmet senior citizens' need for socialization and more active community involvement • Senior citizen not updated on their rights and privileges 			<ul style="list-style-type: none"> • Establishment of Day Center for Senior Citizen per barangay per RA 7876 	
PWDs/CWDs <ul style="list-style-type: none"> • Training Center for PWDs/Vocational Rehabilitation Center and Development • Social Laboratory for Resource Center for Children with Disabilities with complete facilities (Chairs, tables, cabinet for toys, learning materials and qualified teacher • Lack of home for Mentally Challenged person 	<ul style="list-style-type: none"> • Less knowledge • Has skills but cannot be applied • No center for trainings of children and parents with disabilities 			<ul style="list-style-type: none"> • Establishment/ construction of home for the mentally challenged 	<ul style="list-style-type: none"> • Hire trainers for training of sign language and vocational projects • Of a Center for Social-Resource Center for CWDs providing arts & crafts, pre-vocational & pre-academics & meetings for parents of CWDs

CLUP Volume 3 – The Sectoral Studies

<p><i>Victims of Natural and Human-made Disaster</i></p> <ul style="list-style-type: none"> • Lack of Evacuation Center for flood prone barangays 	<ul style="list-style-type: none"> • Victims not properly attended and accounted for • School classes are hampered/ affected as schools are used for temporary evacuation center • Facilities inside classroom are damaged 				<ul style="list-style-type: none"> • Requires flood prone barangays to establish or identify evacuation center • Activate Barangay Disaster Risk Reduction and Management Committee • Conduct Family and Community Disaster Preparedness Training per barangay

CLUP Volume 3 – The Sectoral Studies

Assessing Single Actions for DRR- Social Sector

Action	Implications to DRR Efforts (A)			Implications to Development (B)			Implementation Issues(C)					Total
	Potential to reduced exposure/ risk to life	Potential to reduced exposure/ risk to properties	Urgency of DRR Action	Negative Consequence of No Action	Impact to Preferred Development	Land Use Changes Needed	Ease of Implementation	Resource Needed	Policy Adjustments Needed	Mint of Actions Needed	Efficiency of Action	
	A	A	A	B	B	B	C	C	C	C	C	
Provide relocation to informal settlers according to guidelines	5	5	5	5	5	5	5	5	4	5	4	53
	20,088 affected families	4.9 billion cost of damaged properties	due to loss of lives and damage to properties	Greater damage to lives and properties	Yes, it is within the proposed city development plan, and reduced risk to lives and properties of vulnerable sector	potential for conversion from open spaces, agricultural areas to residential	Requires assistance from Regional and private sector	Needs other funding sources	Yes, because of existing policies	Yes, LGU has implemented several programs for informal settlers	Yes, greater number of informal settlers benefits the project	
LGU to continue land banking and initiate land conversion/ swapping	2	2	1	5	5	5	5	5	5	5	5	45

CLUP Volume 3 – The Sectoral Studies

				Increasing number of informal settlers disrupt city's development	reduced risk of lives & properties of vulnerable sector	Needs for land conversion/s wapping	Requires national, local , NGOs, and private sector assistance	Requires bigger budget allocation	Requires City Ordinances	LGU has undertaken land banking	Favorable for the benefits of the vulnerable sector	
LGU to pursue socialized housing projects in joint venture with private, NGOs and RLAs	2	2	2	4	5	2	4	4	5	5	5	40
				Lives & properties of vulnerable sector is at risk	Improve the living condition of informal settlers	No land use changes	Requires national, local , NGOs, and private sector assistance	Requires bigger budget allocation	Requires City Ordinances	LGU has undertaken land banking	Favorable for the benefits of the vulnerable sector	
Provision of bicycle lane, as well as vehicle less lane in Divisoria	2	2	2	4	5	2	2	3	4	3	3	32
				Traffic problem , risk of lives	less air emissions & develop into parks and recreational area for health benefits	Existing roads are narrow,	Requires national and local assistance and technical expertise,	Needs technical expertise from LGU's and other stake-holders	Needs ordinance and political will			

CLUP Volume 3 – The Sectoral Studies

Establish additional Microscopy centers (4 centers – additional Medtechs, equipment and supplies)	2	1	1	4	5	2	5	5	5	5	5	40
				High incidence of infectious diseases	Early detection , referral of person with infection	NA	Availability of Technical expertise	availability of resources		LGU has capability to manage the said action	Beneficial to the community	
Establish health center within the area of city health office (Poblacion brgy without health center)	2	2	1	3	5	2	5	5	5	5	5	40
				deprivation of health services and additional financial burden on the part of populace	increase productivity and good health condition of the populace and lessen the financial burden		Requires national and local assistance and technical expertise,	National and Local allocation	Existing policies	LGU has capability to manage the said action	Beneficial to the community	

CLUP Volume 3 – The Sectoral Studies

Establish health center in all relocation sites	2	1	2	5	5	2	5	5	5	5	5	42
				Poor health condition and vulnerable to diseases	increase productivity and good health condition of the populace and lessen the financial burden		Requires national and local assistance and technical expertise	National and Local allocation	Existing policies	LGU has capability to manage the said action	Beneficial to the community	
Establish youth center in four (4) strategic areas; Lumbia, Carmen, Nazareth, Lapasan. (if possible near brgy HC)	2	1	2	3	5	2	5	5	5	5	5	40

CLUP Volume 3 – The Sectoral Studies

				High incidence of out of school youth who are lured to petty crimes	OSY are given the opportunities to acquire knowledge for self advancement		Requires national and local assistance and technical expertise	National and Local allocation	Existing policies	LGU has capability to manage the said action	Beneficial to the community	
Establishment of weighing post and BNS physical center in all barangays.	2	1	2	3	5	2	5	5	5	5	5	40
				Conduct of mothers class and weighing are inefficient	Effective, efficient conduct of mothers class & weighing		LGU has capability to undertake the said action	availability of resources		LGU has capability to manage the said action	Beneficial to the community	

CLUP Volume 3 – The Sectoral Studies

Establish Nutrition Center thru Congressional Funds	2	1	2	3	5	2	5	5	5	5	5	40
				Lack of appropriate place for nutrition coordination and other related activities	Appropriate place for nutrition coordination and other related activities		LGU has capability to undertake the said action	availability of resources		LGU has capability to manage the said action	Beneficial to the community	
Provision of appropriate location for the construction of permanent Central Fire Station	2	1	2	4	5	2	5	5	5	5	5	41

CLUP Volume 3 – The Sectoral Studies

				Delayed response to emergency call	Early response to emergency call and reduced risk of life and properties		LGU has capability to undertake the said action	availability of resources from the national		LGU has capability to manage the said action	Beneficial to the community	
Construction of additional jail buildings with complete facilities	2	1	2	4	5	2	4	4	4	4	4	36
Establish city sports complex with complete facilities	1	1	1	3	5	3	4	4	4	4	4	34
Allocate area for Day Care Center as mandated in RA 6972	1	1	1	3	4	2	4	4	4	5	5	34

CLUP Volume 3 – The Sectoral Studies

				deprivation of education services	education services provide		LGU assistance	LGU resources		LGU has capability to manage the said action	beneficial	
Establishment of Senior Citizen Care Center per barangay per RA 7876	1	1	1	3	5	2	4	5	3	5	4	34
Establish Training Center for PWDs/CWDs	1	1	1	3	5	2	5	4	3	5	4	34
Establish Social Laboratory for Resource Center for Children with Disabilities	1	1	1	3	5	2	4	4	3	4	4	32
Establishment/constr uction of home for the mentally challenged	1	1	1	4	5	2	4	4	3	5	4	34

CLUP Volume 3 – The Sectoral Studies

Integrated Social Sector Priority Programs and Projects

Improvement of health facilities and services

- Upgrading of the facilities in the JR Borja Memorial Hospital
- Retrofitting of the JR Borja Memorial Hospital
- Establishment of Youth Center
- Establishment of Weighing Post
- Establishment of BNS Physical Center
- Establishment of Computerized Hospital
- Acquisition of Salter Weighing Scales

Construction of Health Centers in all relocation areas

Water and sanitation services

- Procurement of portable water treatment machine and available clay water filter

Strict compliance of B.P. 220 (socialized housing) & B.P. 344 (accessibility law)

Human settlements program

- Upgrading of blighted areas
- Relocation of 80% families living in high risk areas
- Land Banking

Ordinance declaring no build zone

Retrofitting of at risk school buildings

Expansion of alternative learning system, & alternative delivery modes for at risk students

Establishments of school sites in hazard free zones

Formulation of design standards for school buildings and facilities

Provision of adequate educational facilities

- Construction of additional classrooms
- Acquisition of additional furniture

Improve/rehabilitate affected social welfare services facilities

Construction of day care center in all relocation areas

Disaster emergency and quick response

- Relief operation
- Search and rescue operation
- Camp/evacuation center management

Improvement of security and protective services /facilities

- Establishment of new central fire station
- Acquisition of scientific and forensic equipment
- Construction of additional jail building
- Acquisition of police/firefighting equipment
- Acquisition of additional patrol car

Disaster preparedness, prevention and mitigation program

- Installation of warning system devices in all schools and high risk barangays
- Construction of evacuation center (District 1-2; District 2-2)
- Organize school-based disaster risk reduction and management program

Passage of local ordinance on design standards for green building technology

Coordination/collaboration of activities of the private sectors and CSOs in the implementation of projects and programs

Promotion for Resilient Barangay/s

- Most healthy barangay/s (zero defecation, no stray dogs, zero rabies)
- Most resilient barangay/s (CCA/DRR)
- Child friendly barangay/s

Information Advocacy Program

- IEC on Environmental sanitation campaign
- IEC on school disaster preparedness
- IEC on skills development and technology transfer
- IEC on psychosocial support services
- Value formation, reproductive health and family planning

Implementation of National Greening Program (school, community, institution)

Chapter 4

Economic Sector

4.1 Industry

Situational Analysis

The declaration of Pueblo de Oro in Cagayan de Oro as the first IT Park in Mindanao paved the way for the start of the Business Process Outsourcing (BPO) industry in the city. BPO companies operating in the city are into Call Center, Telemarketing and Medical transcription services. Major BPO requirements considered by these companies in locating in the city were the following:

- *Presence of PEZA-registered IT parks and buildings*
- *A good pool of English speaking youth and professionals.*
- *Availability of ICT Infrastructure (telecommunications etc.)*
- *Urban amenities and facilities*
- *Low cost of doing business*
- *Local Government incentives and support*
- *Availability and continuous supply of power*
- *Good climate and calamity-free area*

The BPO industry can very well thrive in Cagayan de Oro primarily because of the abundance of HUMAN CAPITAL. Being the Center of Excellence for Education and presence of training institutions in Mindanao it can provide a continuous supply of workers to sustain a BPO company's operation. Its geographical location poses an additional advantage in relation to its proximity and accessibility to other key cities and provinces in Mindanao (Iligan City, Ozamis City, Zamboanga City, Butuan City, Davao City, Cotabato City) which has a very young population, thus it can generate and ensure a continuous supply of highly educated and trainable human resource.

The availability of ICT infrastructure and the planned expansion of major telecommunication companies (PLDT, Bayantel, Philcom, MisOrtel, Globe, SMART, TelOf, SOTELCO, CRUZTELCO etc.) in the city are ongoing or in the pipeline and available supply of power also provide a big boost to the city's competitiveness.

The competitive cost of doing business and the availability of housing, educational, medical and tourism amenities and facilities in the city that are comparable with that in Manila and Cebu is also another advantage.

Most importantly, the Local Government Unit has recognized the job generation potential of BPO's and other ICT-related business hence it has now embarked on an aggressive stance in promoting the area to investors and has enacted IT-specific local incentives and full personalized support to potential locators in the city.

The City capitalizes on its thrust towards a Light to Medium industrial classification. Heavy industries, considered pollutive and hazardous, are trailed outside the city on the eastern and western part, majorly on the former side, in one vast area located at Phividec, Villanueva, Misamis Oriental. Plants such as Nestle Phils., Inc., Del Monte Phils., Inc. and Limketkai Manufacturing Corp. (Marca Leon Cooking Oil) are just the three most dominant stakeholders who process raw materials for production. These industries are situated just meters away from the national highway, and two of them even have its own port to transport their goods.

Table 4.1
Inventory of Existing Industrial Establishments by Manufacturing/
Industrial Process; Raw Material Input Production and Markets
Cagayan de Oro City

Name of Industrial Establishment	Address	Manufacturing/ Industrial Process	Raw Materials		Production			Product Market	
			Material	Source	Product	Volume	Value	Local	(other)
Del Monte Philippines, Inc.	Bugo	Canning	Pine-apples, banana, papaya	Bukid non and Mis. Oriental				entire Phils.	
Nestle Philippines, Inc.	Tablon	Food Processing	coffee						
Coca-Cola Bottlers Phils., Inc.	C.M. Recto Avenue	Manufacturing/ Bottling	***transferred to Villanueva, Mis. Or. In 2010***						
Pepsi-Cola Products Phils., Inc.	Tin-ao, Agusan	Manufacturing/ Bottling							
San Miguel Foods, Inc.	Baloy, Tablon	Agriculture							
San Miguel Foods, Inc.	Gusa	Poultry							
Atlas Fertilizer Corp.	Macabalan	Agriculture							
Limketkai Manufacturing Corp.	Pacana St., Puntod	Agriculture							
GAMA Foods Corp.	Tablon	Poultry Industry Integrator							
Feedmill		Feed processing and mixing	feed ingredients	Local	Poultry Feeds			Bukidn on and Mis. Oriental	
Dressing Plant		Poultry Dressing	corn	Bukid non and Misa	Dress ed Chicken	18,000		Minda nao and Visaya	

				mis Orient al				s	
United Laboratories, Inc	Gusa	Medicines							
Zuellig Pharma Corp.	Cugman	Medical Supply							
Mercury Drug Corporation	T. Neri St., Brgy.9	Pharmacy							
PMFTC Incorporated	A Velez, Mabini St.	Manufacturing							
Supervalue, Incorporated	SM City, Upper Carmen	Gen. Merchandise							
Madison Shopping Plaza, Inc.	SM City, Upper Carmen	Gen. Merchandise							
Panasonic Manufacturing Phils.	Gusa	Manufacturing							
Samsung Electronic Phils., Inc.	A Velez	Computer							
Sony Phils, Inc.	Barangay 14	Dealer							
CEPALCO Energy Services and Trading Corporation	T. Chavez St., Brgy.4	Electrical							
CEPALCO	T. Chavez St.	Franchise							
Minergy	Tablon	Franchise							

Source:

The local revenues from the manufacturing sector plunged in 2008 with a -26% from the previous year, but considerably increased the next 2 years (2009-2010) at 12%-13%. In 2011, slightly decreased again (-1.32%) (Table 4.2).

Table 4.2
Local Revenue of Manufacturing Establishments, CY 2006-2012
Cagayan de Oro City

CY	Amount in Pesos	Increase/(Decrease) in Pesos	Increase/ (Decrease) in Percentage
2006	52,231,426.07		
2007	53,453,891.07	1,222,465.00	2.29%
2008	42,494,573.97	(10,959,317.10)	-25.79%
2009	48,321,230.08	5,826,656.11	12.06%
2010	55,813,084.91	7,491,854.83	13.42%
2011	55,088,622.21	(724,462.70)	-1.32%
2012	62,242,367.83	7,153,745.62	98.68%

Source: City Finance Department

The local goods sold outside the country such as bananas, pineapples, abaca, lumber, minerals, fabric etc. were well received internationally in the years 2007-2008 as indicated in the volume in metric tons (below). The same goes for the imported goods brought in the city on those same years, where Cagayan de Oro experienced the bulk in demand for clothing, fruits and spices, raw materials etc. calmed down its succeeding years.

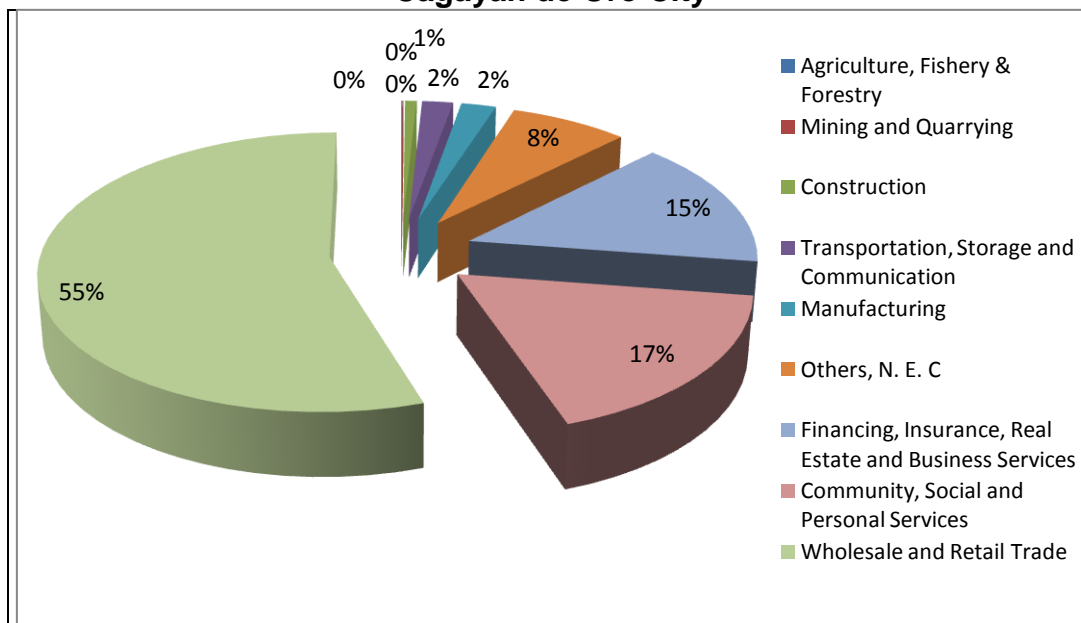
Table 4.3
Volume & Value of Exports & Imports
Cagayan de Oro City

YEAR	EXPORTS		IMPORTS	
	Volume (in M.T.)	Value (in \$)	Volume (in M.T.)	Value (in PhP)
2007	917,283.59	174,374,951.97	1,317,912.59	14,904,528,260.00
2008	957,154.41	269,158,280.00	659,537.32	12,641,764,562.00
2009	589,484.54	195,939,224.00	377,686.91	5,476,161,653.66
2010	331,567.14	183,795,749.00	311,706.03	4,447,163,780.00

Source: City Finance Department

Wholesale and Retail Trade gets the biggest chunk in the industry sector comprising 55% of the pie, followed by the Community, Social and Personal Services with 17%. Financing, Insurance, Real Estate and Business Services contributes the third largest share with 15% and Other industries (not elsewhere classified) contribute 8%. Other categories which contributed a minimal of 2% from each are the Manufacturing and Transportation, Storage and Communication. Construction barely shares 1% to total.

Figure 4.1
Business Establishments by Major Industry Divisions
Cagayan de Oro City



While Cagayan de Oro City's industrialization is more or less directed to the establishment of light to medium Industries, the PHIVIDEC Industrial Estate considered as the biggest industrial estate in the country having 3,000 hectares caters to medium to high industries. Located about 25kms east outside of city proper, it is home to 71 industry locators; twenty-seven (27) of which are into manufacturing, the first and biggest locator is the Philippine Sinter Corp. (PSC), a subsidiary of Kawasaki Steel in Japan (owned by JFE Steel). Now joining among the biggest locators in the PHIVIDEC area is the STEAG State Power Inc. Others that have established in the estate are the Limketkai Food Manufacturing Corp., San Miguel Corp., and TLC Beatrice Foods along with other six service-related firms.

The Mindanao Container Port (MCP) also located inside the PHIVIDEC Industrial Estate started last January 2004 for the primary purpose of decongesting cargo traffic at the Cagayan de Oro Port as it provides the medium term needs of PHIVIDEC clients. Cagayan de Oro has been a city whose strides are taken and moulded to assume the role of being the trans-shipment and business hub of the region. The most significant one is for the tourism industry's white water rafting adventure to boom being the city's One-Town-One-Product (OTOP). Among its major industries are food giants Del Monte Philippines, Inc. (DMPI), Nestle Philippines Inc., Coco-based industries including the Cagayan de Oro Oil Company, Limketkai Sons Milling Co.; wood-based CATIMCO Group, and several agri-based industries like GAMA Foods Corp., San Miguel Foods both with support industries for poultry and piggery like feed mill and dressing plants sustaining the ubiquitous small businesses (MSME's) of *lechon manok* and *liempo* (roast chicken and pork belly), being a Filipino favorite.

Disaster Risk Assessment

Table 4.4
Estimated Damage of TS Sendong to Major Industry Sectors,
Cagayan de Oro City

Industry Classification	Amount of Damage (In PhP000)	% Share
Agriculture, Fishery and Forestry	40,240	17.48
Manufacturing	117,000	50.81
Trading	50,000	21.71
Servicing	23,030	10.00
TOTAL	193,470	100.00

Source : SAP

DEVELOPMENT NEEDS

Intensify industrial establishments at barangay Tablon as priority investment area:

- Designate expanded industrial zone for future development, new plant site/location for relocation of industries currently inappropriate to their existing location (within residential areas); Area Requirement: 100 hectares within barangay Tablon to Palalan.
 1. Relocation for light to medium industries surrounded by residential area e.g. Barangay Cugman
 2. Strict monitoring on industrial plants to ascertain compliance to environmental requirements; e.g. ECC.
 3. Industrial zone area for relocation/transfer.
 4. Improvement of private ports and opening of these facilities to other industries to service shipment of products and raw materials;
 5. Require existing industries along the coastal area to plant and maintain mangroves.
- Develop economic zone for light to medium industries at barangay Lumbia:
 1. Enhance cashew nuts production and product quality inclusive of packaging.
 2. Promote backyard-type cashew plantation.
 3. Conduct capability enhancement program related to cashew production and product innovation

- Establish retention basins at strategic areas similar to MMDA
 1. Conduct study to determine appropriate area for retention basin establishment (Gaisano Mall, KetKai, and MUST);
 2. Require industrial establishments to maintain retention basins.
- Dredging of natural waterways (rivers, creeks, etc.)
- Adopt the 20-m easement of no build-zone and utilize it for research and forestry development, agriculture, fishery, mangrove plantation and sanctuaries
 1. Strict implementation of guidelines for sand and gravel extraction and provide protection measures along the banks of the area applied.
 2. Contribute to the long term plan in establishing dikes for systematic quarry operations (see sample plan).
 3. Formulate guidelines to implement maximum depth allowable for sand and gravel extraction (more or less 2.00 ms and succeeding extraction to be based on replenishing capacity of the river.
 4. Quarry permit/operators that fall at meandered sections of the river shall be directed to include straightening of the river and shall form part of their development plan.
 5. Coordination of the government agency as to the private lots affected by said rechanneling/straightening.
- Straightening/Rechanneling of severely meandered sections of Iponan River and other areas to increase the discharge capacity since obstruction are already minimal
 1. Strict implementation of guidelines for drainage system of land developments/subdivisions.
- Study and Design of drainage master plan of the city.
 1. Establish the perims and boundaries of the No Build Zone area in accordance with the existing city ordinance.
- To come up with an ordinance requiring land developments to provide retention basins to delay discharge of surface run off to existing waterways.
- Area declared as no build zone (from shoreline to Pagatpat more or less 90 has., from shoreline to Balulang more or less 50 has., more or less 15.25 has. comprising Isla de Oro, Bugnao, Baksan) shall be utilized for plantation, propagation of premium trees, research for forestry, agriculture, fisheries and wild life and recreation.

Table 4.5
TECHNICAL FINDINGS
Industry

OBSERVATION	EXPLANATIONS	IMPLICATIONS	POLICY OPTIONS
Congestion of traffic	<p>Requisite of a bigger space/area (to include parking) for trailer trucks and container vans.</p> <p>Frequent/regular movement of materials and products (input/output deliveries)</p> <p>Indiscriminate parking/double parking</p> <p>Requisite of ample time for loading/unloading of goods</p>	<p>Heavy air pollution</p> <p>Increased traffic hazard and likelihood to accidents</p> <p>Reduced productivity</p> <p>Increased travel time</p>	<p>Construction of overpass</p> <p>Promotion of use of bicycles and establishment for its lanes</p> <p>Designation of appropriate and allowed loading/unloading and parking areas</p> <p>Regulation of allowable time and schedule for travel</p>
Mismatched skills vis-à-vis industries' needs	<p>Mostly skilled and highly qualified human resources from this city migrate to the northern part (Cebu/Manila)</p> <p>Others who are looking for better opportunities prefer to work in other countries</p> <p>People are not inclined into Service Trade, Industrial Trade and Crafts as per summary of graduates by field of discipline (SY 2008-2009).</p>	<p>Brain drain</p> <p>Brain drain</p> <p>Produced graduates have mismatched qualifications</p> <p>Industries' needs are not met and satisfied</p> <p>Technical trainings to available human resources</p>	<p>Offering a more competitive pay locally</p> <p>Provision of incentives and other benefits</p> <p>Creation of lots of jobs and other livelihood opportunities</p>
Considerably higher cost of doing business (rent/lease)	High cost of fees		

PROGRAMS AND PROJECTS

1. Old Lumbia Airport Conversion into Industrial Economic Zone
2. Cashew and Cashew Nuts Production at Lumbia for Cashew
3. Industry Development/Product Innovation and Promotion
4. Tourism Infrastructure and Economic Zone @ barangay Cugman
5. Development/expansion of industrial warehousing facilities (Brgy. Cugman).
6. Light to medium industrial development at barangay Tablon.
7. Lower Puerto to Bugo light and medium industries
8. Upper Puerto agro-industrial development

4.2 Commerce and Trade

SITUATIONAL ANALYSIS

The presence of all types of commercial establishments in the city is a clear indication that trade and commerce is the prime mover of the city's economy. As of 2012, there are five (5) **malls** in the city, at least nine (9) major **Central Business Districts**, six (6) **public markets**, nine (9) **neighborhood centers**, several **commercial complexes** and **commercial strips** rationally distributed all over the city (see table below). To these, a total of 18,144 registered businesses as of 2010 make up the bustling city of Cagayan de Oro.

Table 4.6
Inventory of Commercial Areas
Cagayan de Oro City

Type of Commercial Areas	Location	Area (in sq.m.)	Market Catered	
			Local	Outside (export)
Malls				
· Gaisano City Mall	Recto Avenue – Corrales	23,877.84		
· Limketkai Mall	Lapasan	46,320.70		
· SM City	Upper Carmen	50,442.78		
· Ororama Supercenter	Cogon	13,588.96		
-Ayala Centrio Mall	Lapasan	51,232.36		
Central Business District				
· Commercial Business District (CBD)	Barangays 1 to 40			
· Alwana Business Park	Cugman	330,000		
· Pueblo de Oro Business Park	Upper Carmen	3,600,000		
· Pride Rock Business Park	Gusa			
· Limketkai Center	Lapasan			
· Cogon CBD	Cogon			
· Carmen CBD	Carmen			
· Agora Square	Lapasan			
· Westbound Market/ Terminal Square CBD	Bulua			
· Georgetown Cybermall	R.N. Pelaez Blvd, Carmen	2,000.00		
Public Market				
· Cogon Market	Cogon District			
· Carmen Market	Carmen			
· Agora/Market City	Lapasan			
· Puerto Market	Puerto			
· Eastbound Terminal & Market	Gusa			

· Westbound Terminal & Market	Bulua			
Commercial Strips				
· Along J.R. Borja Extension	Camaman-an			
· Along R.N. Pelaez Boulevard	Carmen to Kauswagan			
Commercial Complex				
·				
Neighborhood Center				
· Ororama Superstore	Carmen			
· Gaisano Superstore	Cogon			
	Carmen			
	Bulua			
· Savemore Market	Lapasan			
	Capistrano			
	Kauswagan			
· Robinsons Supercenter	Gusa			
· Puregold	Lapasan			

Source:

Wholesale and Retail Trade dominate the businesses in the city reaching a 5-digit number in 2010 or 10,227 permits from 8,521 in 2009 and as compared to other applied categories. The Community, social and personal service is second in the most applied at 3,274 in 2010, followed by Financing, Insurance, Real Estate and Business Services at 2,376 on same year. On the summary, there is an increasing trend of investors permitted to venture in the city in the last five years (2006-2010) arriving at 18,144.

Table 4.7
List of Business Permits Issued by Type
Cagayan de Oro City

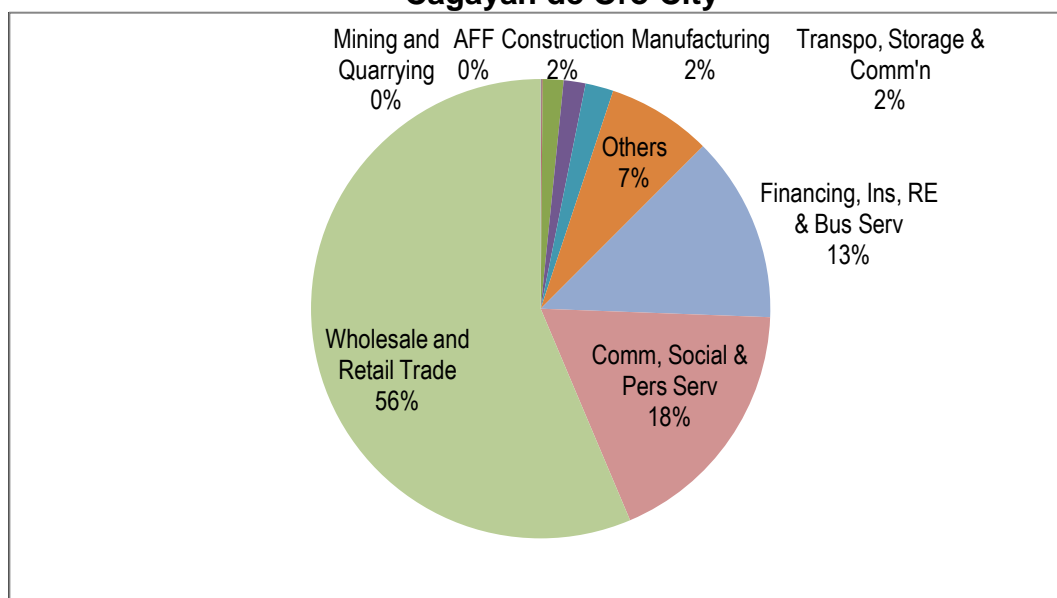
Major Industry Division	2006	2007	2008	2009	2010
Agriculture, Fishery and Forestry	-	-	156	13	14
Mining and Quarrying	1	4	6	4	11
Manufacturing	671	732	345	209	279
Construction	121	130	272	282	266
Wholesale and Retail Trade	8,771	8,577	8,431	8,521	10,227

Transportation, Storage and Communication	260	270	300	340	358
Financing, Insurance, Real Estate and Business Services	1,776	1,890	2,192	2,303	2,376
Community, Social and Personal Services	3,141	3,238	3,068	2,969	3,274
Others N.E.C.	891	951	1,109	1,245	1,339
Total	15,632	15,792	15,879	15,886	18,144

Source: City Finance Department

The figure below shows that wholesale and retail trade continuously dominate the trade and commerce sector accounting for 56% as of 2010. Community, Social and Personal Services rank next with 18% while the Financing, Insurance, Real Estate and Business Services ranking third make-up 13%. These consist the top three types of businesses dominating the trade and commerce. Other categories of businesses contributed 7% while the construction, manufacturing and transportation/storage and communication equally share 2% each.

Figure 4.2
Breakdown of Business Permits Issued by Type
Cagayan de Oro City



The banking sector registered a modest average rate of increase of 5.2% on a year-on-year basis, although it posted a negative growth from 2007 to 2008 with our economy being not exempt from the effects brought about by the economic slump during that year. The banking sector however immediately recovered on the following year of 2009 posting the biggest increase at 14%.

This sector sustained substantial increases onwards between 4% - 5% to 2011 and accounts for about 4.3% to the total financing institutions.

Table 4.8
Inventory of Commercial Establishments, Banking Institution
Cagayan de Oro City

Year	Number	Increase / (Decrease)	Growth Rate
2007	88		
2008	86	-2	-2%
2009	98	12	14%
2010	102	4	4%
2011	107	5	5%

Source: City Finance Department

Registered new businesses indicate a wavering increase of approximately 21% from 2005 to 2006 and on the following year (2007) posted a negative 10.5%, bounced back again in 2008 with a 9.6% increase. 2009 registered a negative 7.14% increase and by 2010 considerably increased to 7.78%

Table 4.9
New Business in Cagayan de Oro City for 2005-2012

Year	No. of New Business Establishments	Total Capital (in Pesos)	%Increase (Decrease)
2005	2,874	200,396,906.81	
2006	3,405	252,594,851.60	20.66
2007	3,002	239,559,311.33	-10.51
2008	3,079	246,773,179.41	9.6
2009	3,038	345,525,450.21	-7.14
2010	3,199	444,036,262.13	7.78
2011	3,611	566,717,070.53	
2012	3,329	957,219,774.85	

Source: City Finance Department

Consistent with the increase in the number of businesses, revenues generated on Business Taxes and Fees proportionately increase posting an average growth rate of 12% during the last five (5) years as shown below.

Table 4.10
Revenues Generated on Business Taxes and Fees (in PhP)
Cagayan de Oro City

	2007	2008	2009	2010	2011
Business Taxes/ Reg. Fees	375,216,366.11	439,397,809.11	456,900,030.29	499,503,398.12	581,492,116.17
Absolute Inc/(Dec)		64,181,443.00	17,502,221.18	42,603,367.83	81,988,718.05
%Growth Rate		17%	4%	9%	16%
AGR					12%

Source: City Finance Department

Table 4.11
Existing Programs and Projects for Commerce and Trade, CY 2011
Cagayan de Oro City

Programs/Projects	Location	Budget Allocation	Schedule of Implementation	Funding Sources	Implementing Agency/ies
Go Negosyo - Entrepreneurship	CDO			Local, National	DTI, LGU
BMBE - MSME	CDO			Local, National	DTI, LGU
Project Invest	CDO		2011-2013	USAid Invest	DTI, LGU
Investment Promotion Program	CDO		Annually	USAid Invest	DTI, LGU
LINC-EG	CDO		2009-2011	USAid Invest	
Computer Networking	CDO		2011		

Disaster Risk Assessment

The trade industry accounted for 21.71 percent of the total damage to the Economic Sector valued at PhP50.00 million. It is estimated that micro and small enterprises comprised 60 percent or (5,366) of the total businesses were affected by flooding among the 44 flood-prone barangays. SMEs in barangays Balulang, Carmen, Macasandig, Nazareth and some of the Poblacion Barangays; 06, 07, 10, 13, 15, 17, 18, 26 and 35 suffered the most losses and damages from the flood. The damages are inclusive of both infrastructure and inventories of trading warehouses, production area and retailers/wholesalers of consumer goods.

A total of PhP23.03 million in damages or 10 percent of the total damage was reported by the servicing sector. Among the service firms heavily affected are hotels, restaurants, schools and those engaged in real estate and renting.

DEVELOPMENT NEEDS

URBAN EXPANSION AREA # 1 Western Urban Development

Western Urban Development covers Barangay Bulua, Patag, Kauswagan, Bonbon and Bayabas.

This growth node serves as the entry and exit points from and to Laguindingan Airport and other parts of the country. This also serves as the major convergence point for people, goods and products, as well as transport service to and from other parts of the region.

- **Upgrading/improvement of Existing Facilities**
 - West-bound Integrated Bus and Jeepney Terminal
 - Fish and vegetable landing
- **Regulation Policies and Guidelines**
 - Establish commercial strips along highways (120 hectares)
 - Establish/construct main drain (canal) 2 hectares

URBAN EXPANSION AREA #2 West-Uptown Development Area

Covering barangays Carmen, Canitoan, and Lumbia. This will be a medium to high-density mixed-use pedestrian friendly center with high end low-density type of development for residential and commercial uses. This area will decongest the present major urban center/city core and shall provide more opportunities for socio-economic activities.

The Lumbia Airport shall be converted into an industrial area/economic zone when the Laguindingan Airport becomes operational which shall then become a major provider of employment for the people in the city.

The area has an existing road network with the newly established Macapagal Highway Extension connecting to the western coastal highway and an established residential and commercial areas and neighborhood centers such as; Pueblo de Oro Township, Xavier Estates and Crown Communities.

Requirements, Regulations and Guidelines

- Development Master and Urban Design Plan
- Establishment and integration of green belt areas within Pueblo Township and other subdivisions located in the area.
- Establishment of tree parks
- Establishment/construction of main drainage from airport with outfall to Calaan creek

- Waste water treatment for subdivisions (1% of project area taken from the 5% of the open space)
- Rain harvesting for commercial establishments and mixed-use residential buildings.
- Establishment of retirement community

URBAN EXPANSION #3 - East-Uptown Development

Located in Barangays Gusa, Indahag, Macasandig and Camaman-an. This area will have the same function as that of the West-Uptown Development Area with the presence of high-end subdivisions like the Fil-Estate Subdivision and Alegria Hills.

This area is linked to the other major urban centers through the Pelaez Highway that also connects to the West-Uptown Development Area.

Existing Facilities:

Presence of Convention Center, Camp site for Boys Scouts of the Philippines, presence of government institution (Court of Appeals), high-end residential, heritage area (Huluga Cave) and presence of city relocation site

Requirements, Regulations and Guidelines

- Slope protection/regulated development (for slope 18 deg and up)
- Establishment of green belt areas for subdivisions with slope 18 deg and up
- Establishment of tree parks in subdivisions (5% of project area as open space)
- Strict implementation of tree planting strips in subdivisions
- Establishment/construction of infra-support amenities and facilities (introduction of dissipaters/retention dam within its creeks)
- Waste water treatment for subdivisions (1% of project area taken from the 5% of the open space)
- Rain harvesting for commercial establishments and residential bldgs
- Agro-Tourism development at Palalan (piped irrigation system for farm lots watering) 150 hectares

URBAN EXPANSION #4

Eastern Urban Development Area

This area is composed of the following sub-nodes namely: Upper Puerto, which is identified as an Agro- Industrial Area; Lower Puerto and Bugo which are existing industrial and residential areas; Agusan and Balubal, which are hosts to high-end subdivisions; Tablon, which is an existing industrial area; and, Palalan, Tablon, which is identified for Agro-Tourism.

Linkage of this area to the provinces of Bukidnon and Cotabato is through the Sayre Highway which has recently been upgraded with a fly-over to ease traffic congestion at the intersection.

A different route link the area to the provinces of Davao, Agusan, Surigao and Sarangani through the Iligan-Cagayan-Butuan Super Highway.

Puerto public market serves as trading center for goods and other products from adjoining areas.

Requirements:

- Development of infra-support (road network) and other facilities (wastewater treatment), while harmonizing environmental mitigation measures (imposition of greenbelt areas, tree parks and planting strips etc.)
- Installation of rain harvesting facility on commercial establishments and residential buildings
- Regulated development for slope 18 degrees and higher
- Limit industrial land use along the coastal area at Tablon
- Improvement of livelihood for marginal fisher folks affected while at the same time retain the industrial base of its locality.

URBAN EXPANSION AREA #5

Downtown Development Area – Poblacion (CBD), Carmen, Lapasan, Puntod and Macabalan

Existing Commercial and Residential Areas

- Presence of big businesses like Limketkai Mall, Gaisano City Mall and soon to open, the Centrio Mall and Tower
- Port Area
- Integrated Bus and Jeepney Terminal
- Public Market (Cogon, Carmen and Agora)
- Recreational Sports Facilities (Sports Center)
- Institutional Facilities (Academic and Government)

Requirements, Regulations and Guidelines

- Develop an expanded downtown master plan
- Provision of new transportation master plan with the introduction of new traffic scheme
- Installation of Rain harvesting facility for commercial establishments and residential buildings
- Establishment of greenbelt areas

Table 4.12
Technical Findings
Commerce and Trade

OBSERVATION	EXPLANATION	IMPLICATIONS	POLICY OPTIONS
Traffic Congestion	<ul style="list-style-type: none"> • Sidewalks are used for sidewalk vending and/or ambulant vendors • Congested city streets due to lack of provision for parking space • Double parking by 10 wheeler trucks • Multiple parking at major CBD's 	<ul style="list-style-type: none"> • Reduced revenues to real business tax payers • Air pollution • Narrowing of access which pose danger to pedestrian • Increased traffic accidents • Increase travel time • Delayed transactions and lost opportunities 	<ul style="list-style-type: none"> • Additional roads and bridges • Construction of overpass • Pedestrianization (DV Soria) • Strict implementation of traffic rules and regulation • IEC • Establishment of bicycle lanes • Promotion of use of bicycles
Frequent Flooding	<ul style="list-style-type: none"> • Undersized drainage culverts that cannot accommodate the volume of water during rainy days • Clogged-up and lack of maintenance of drainage channels • Rapid urbanization and disturbance of landforms along riversides • Presence of dense settlements in flood-prone areas inclusive of natural waterways (dry riverbeds) and in geologically unstable areas (such as sandbars) • Accumulation of debris in drainage canals 	<ul style="list-style-type: none"> • Hampered business transactions/activities • Opportunities lost • Damage to properties and loss of inventories • Reduced revenues and income • Reduction of valuation of land • Increased poverty incidence • Increased expenditures for relief and rehabilitation • Poor health and sanitary condition 	<ul style="list-style-type: none"> • Strict implementation of legal easement as provided by law • Implementation of project NOAH/warning system in coordination with DOST • Implementation of DRR management plan • Relocation of dwellers within the identified danger zone • Preparation of comprehensive drainage master plan • Implementation of river basin planning system approach • Implementation of integrated coastal management plan (11 coastal barangays) • Establishment of buffer

	which causes overflowing • Excessive tree cutting and deforestation of watersheds • No easement along rivers		zones in danger areas • Implementation of national greening program (upstream barangays)
Highly Concentrated Business Establishments in Areas	• Traffic congestion • Increase in volume of water/capacity for drainage outflow • Increase in garbage volume for collection • Increase in demand for utilities (power, water & communications) • Extensive concrete surface • Surface water run-off	• Increased carbon dioxide (CO ₂) emissions • Flooding • Inadequacy/inefficiency of solid waste management • Heat emissions and increase in temperature • Excessive rainwater not absorbed by soil undersized drainage canals	• Dispersal of Commercial Areas • Development of nodal growth areas • Transportation Plan and appropriation traffic scheme • Develop drainage/sewerage master plan • Expansion of carbon sink areas • Promote green building architecture • Promote rain harvesting facility

PRIORITY PROGRAMS AND PROJECTS

1. Development of new growth / expansion areas
 - Western Urban Development (covering BULPATKABONBAY)
 - West-Uptown Development Area (Barangays Carmen, Canitoan, and Lumbia)
 - East-Uptown Development Area (Barangays Gusa, Indahag, Macasandig and Camaman-an)
 - Eastern Urban Development Area (Upper Puerto, Lower Puerto and Bugo, Agusan and Balubal, and Tablon)
 - Downtown Development Area – Poblacion (CBD), Carmen, Lapasan, Puntod and Macabalan
2. Development of infra-support facilities/amenities (Please refer to Infra Sector)
 - Provision of ample parking areas
 - Upgrading of drainage systems
 - Development of sewerage system
 - Improvement of telecommunication network facilities

4.3 Agriculture, Fishery, Forestry and Mining

Situational Analysis

A. Agricultural Production

1. Crop Production

Major crops by area of crop harvested in hectares include corn, bananas, fruits & nuts and vegetables averaging a total of 7,579 hectares or 13% to total city land area during the last four years (2007-2010). Among these major crops, biggest area is devoted to corn with 17% (3,411 has.), area devoted to bananas accounted for 6% (1,261 has.), root crops and fruits & nuts share 5% each (1,002 and 954 hectares respectively) while vegetables account 3% (621 has.)

Table 4.13
Area of Crops Harvested
Cagayan de Oro City

CROPS	AREA OF CROPS HARVESTED (in has.)			
	2007	2008	2009	2010
Corn	3,090.00	3,853.00	3,853.00	2,848.00
Rice	102.00	99.00	99.00	104.00
Vegetables	548.80	624.20	723.20	587.50
Banana	1,239.00	1,290.00	1,290.00	1,225.50
Rootcrops	957.70	1,059.50	1,059.50	931.00
Coffee & Cacao	28.00	45.50	45.50	52.50
Fruits & Nuts	917.30	879.00	1,171.50	846.50
Abaca		17.00	17.00	14.00
Coconut		324.00	324.00	50.40
TOTAL	6,882.80	8,191.20	8,582.70	6,659.40

Source: Agricultural Productivity Office

Total area planted to crops averaged 38% to total agricultural cover with the biggest area devoted to corn. However, a decrease in total area planted to crops in 2010 was brought about by a sharp decline in the area devoted to coconut from 324 hectares to only 50.4 hectares which accounted to about 84% reduction. The reason for its reduction was due to the cutting of senile trees which needs to be replaced.

Table 4.14
Major Agricultural Crops by Area, 2007-2010
Cagayan de Oro City

CROPS	2007		2008		2009		2010	
	AREA	%	AREA	%	AREA	%	AREA	%
Corn	3,090	15.2	3,853	19	3,853	19.9	2,848	14
Rice	102	0.5	99	0.5	99	0.5	104	0.5
Vegetables	548.8	2.7	624.2	3.1	723.2	3.8	587.5	2.9
Banana	1,239	6.1	1,290	6.3	1,290	6.7	1,225.5	6
Rootcrops	957.7	4.7	1,059.5	5.2	1,059.5	5.5	931.0	4.6
Coffee and Cacao	28	0.1	45.5	0.2	45.5	0.2	52.5	0.2
Fruits and Nuts	917.3	4.5	879	4.3	1,171.5	6	846.5	4.1
Abaca	-	-	17	0.1	17	0.1	14.0	0.1
Coconut	-	-	324	1.6	324	1.7	50.4	0.2
Total	6,882.8	33.8	8,191.2	40.3	8,582.7	44.4	6,659.4	32.6
TOTAL AGRICULTURAL AREA	20,337.81		20,337.69		19,335.27		20,404.76	

Source: Agricultural Productivity Office

Volume of crops harvested during the last four years (2007-2010) showed that banana, root crops and fruits & nuts ranked top three among major crops harvested. In terms of value, banana ranked highest with P119,702.75 accounting for about 23% to total value, followed by fruits & nuts with P110,522.38 contributing 21.6%, vegetables ranked third with P97,756.58 or 19%, rootcrops with P84,018.50 or 16% and corn with P81,931.55 or 15% to complete the top five major crops raised in the city.

Table 4.15
Major Agricultural Crops by Volume and Value of Crops Harvested
Cagayan de Oro City

CROPS	2007		2008		2009		2010		Ave. Volume (m.t.)	Ave. Value (PhP 000)
	Volume (m. t.)	Value (P 000)	Volume (m. t.)	Value (P 000)	Volume (m. t.)	Value (P 000)	Volume (m. t.)	Value (P 000)		
Corn	6,942.80	62,828.20	9,874.4	98,744.00	9,874.40	98,744.00	7,490.00	67,410.00	8,545.40	81,931.55
Rice	458.00	4,580.00	342.10	6,158.80	342.10	6,157.80	397.00	3,970.00	384.80	5,216.65
Vegetables	7,361.10	76,787.30	8,604.90	90,066.00	8,635.90	90,066.00	7,589.00	134,107.00	8,047.73	97,756.58
Banana	12,545.00	101,480.00	13,609.50	108,783.00	13,609.50	108,783.00	13,131.00	159,765.00	13,223.75	119,702.75
Rootcrops	10,274.50	35,419.00	13,617.00	53,182.50	13,617.00	53,182.50	11,294.50	194,290.00	12,200.75	84,018.50
Coffee & Cacao	26.50	1,325.00	44.00	1,745.00	44.00	1,745.00	70.50	5,630.00	46.25	2,611.25
Fruits & Nuts	15,217.20	119,516.50	11,100.20	95,119.00	11,100.20	95,119.00	8,492.80	132,335.00	11,477.60	110,522.38
Abaca	0	0	8.50	510.00	8.50	510.00	28.00	1,400.00	11.25	605.00
Coconut	0	0	347.60	5,214.00	347.00	5,214.00	772.50	30,900.00	366.78	10,332.00
TOTAL	52,825.10	401,936.00	57,548.20	459,522.30	57,578.60	459,521.30	49,265.30	729,807.00	54,304.30	512,696.65

Source: Agricultural Productivity Office

Generally, crop production area from year 1 (2009) to year 2 (2010) decreased except for slight increases on the areas devoted for rice (5 has) and the combined area for coffee and cacao (7 has). As to volume of production; fruits & nuts, corn and root crops registered the most significant decreases over year 1 due to reduction in crop effective area. Rice as staple crop along with industrial crops like coconut, combined coffee & cacao and abaca manage to register slight increases brought by the corresponding increase in area planted except for coconut which was not specified further whether production was on green nuts or matured nuts as copra.

Table 4.16
Comparative Agricultural Crop Area and Production, 2009-2010
Cagayan de Oro City

Major Crops	AREA			VOLUME OF PRODUCTION		
	2009	2010	Increase/ (Decrease)	2009	2010	Increase/ (Decrease)
Corn	3,853.00	2,848.00	(1,005.0)	9,874.4	7,490.0	(2,384.4)
Rice	99.00	104.00	5.0	342.1	397.0	54.9
Vegetables	723.20	587.50	(135.7)	8,635.9	7,589.0	(1,046.9)
Banana	1,290.00	1,225.50	(64.5)	13,609.5	13,131.0	(478.5)
Rootcrops	1,059.50	931.00	(128.5)	13,617.0	11,294.5	(2,322.5)

Coffee and Cacao	45.50	52.50	7.0	44.0	70.5	26.5
Fruits and Nuts	1,171.50	846.50	(325.0)	11,100.2	8,492.8	(2,607.4)
Abaca	17.00	14.00	(3.0)	8.5	28.0	19.5
Coconut	324.00	50.40	(273.6)	347.0	772.5	425.5
TOTAL	8,582.70	6,659.40	(1,923.3)	57,578.6	49,265.3	(8,313.3)

Source: Agricultural Productivity Office

Majority of the agricultural support facilities and services are found in District I, where most of the rural barangays are located. As of 2012, the multi-purpose drying pavements for crops are the most numbered at 41 units and all operational, followed by corn sheller at 15 units.

Table 4.17
Agricultural Support Facilities and Services, CY 2012
Cagayan de Oro City

Post Harvest Facilities and Support Services	Location		Total	Type/Capacity	% Utilization	Remarks
	District I	District II				
1. Corn Mill	3	-	3			Operational
2. Rice Mill	5	-	5			Operational
3. Multi-Purpose Drying Pavement	33	8	41			Operational
4. Warehouse	3	1	4			Operational
5. Corn Sheller	14	1	15			Some Need Repair
6. Rice Thresher	7	-	7			Operational
7. Kuliglig	3	-	3			Needs Repair
8. Mechanical Dryer	1	-	1			Non-Functional

Source: Agricultural Productivity Office

As of year 2011, the prevalent agricultural occupations is that of the Farmers Associations accounting forty-two (42) registrants, inclusive of crop and livestock farming. The Rural Improvement Club (RIC) comes next at twenty-seven (27) accreditations, and the Fisherfolks Associations at twenty-one (21).

Table 4.18
Major and Minor Agricultural Occupations Groups in Urban and Rural Areas of Cagayan de Oro City, 2011

RURAL-BASED ORGN.	NUMBER ORGANIZED	REMARKS/STATUS
Farmers Associations	42	Federated as a local chapter of the P4MP
Rural Improvement Club (RIC)	27	Federated at the city level
4-H Club	10	Federated at the city level
Fisherfolks Association	21	Federated as Federation of Coastal Barangays Fisherfolk Association of CDOC (FEDCOBAFAC)
Barangay Agricultural and Fishery Council (BAFC)	20	Organized in the city level as ICCAFC
Agricultural Cooperatives	17	Organized in the city level as CDO Federation of Agricultural Cooperatives (CFACO)

Source: Agricultural Productivity Office

Table 4.19
Agrarian Related Concerns, Cagayan de Oro City

CONCERNS	LOCATION	AREA (Hectares)	No. OF FARMER BENEFICIARIES
A. CARPable Lands			
1. Covered	Dansolihon, Cagayan de Oro City	9.9458	4
	Bayanga, Cagayan de Oro City	12.0000	4
	Pagatpat, Cagayan de Oro City	105.0000	66
	TOTAL	126.9458	
2. To be Covered			No. of potential Farmer Beneficiaries
	Bayanga, Cagayan, de Oro City	13.0751	5
	Canitoan, Cagayan de Oro City	30.2728	15
	Dansolihon, Cagayan de Oro City	30.0000	12
	Indahag, Cagayan de Oro City	47.2043	29
	Lumbia, Cagayan de Oro City	13.9178	7
	Mambuaya, Cagayan de Oro City	31.8091	20
	Pagatpat, Cagayan de Oro City	13.6949	7
	Puerto, Cagayan de Oro City	198.1784	209
	San Simon, Cagayan de Oro City	31.8181	13
	TOTAL	409.9705	
B. Agrarian Reform Communities (ARCs)			
	Indahag, Cagayan de Oro City	266.7738	171
	Mambuaya, Cagayan de Oro City	147.0377	102
	Pagalungan/ Tagpangi ARC	630.0000	395
	Taglimao, Cagayan de Oro City	278.6345	99

Source:

2. Livestock and Poultry

Livestock production is limited to backyard and small-scale-raising with hogs predominating 57% of total livestock population during the last four years (2007-2010), cattle and goats contribute about 18% each during the same period with more or less 7,000 heads to total inventory. Chicken makes-up 100% to total poultry population with a few number heads of other kinds of poultry raised.

Table 4.20
Livestock and Poultry Population
Cagayan de Oro City

LIVESTOCK AND POULTRY INVENTORY (In Number of Heads)							
TYPE	SPECIE	2007	2008	2009	2010	AVERAGE	PERCENT AGE
LIVESTOCK	Carabao	1,707	1,646	1,620	1,700	1,668	4%
	Hogs	23,947	22,890	21,474	22,600	22,728	57%
	Goat	7,927	7,469	6,784	7,100	7,320	18%
	Cattle	7,953	7,459	6,702	7,100	7,304	18%
	Horse	839	758	620	700	729	2%
	Sheep	374	326	241	300	310	1%
	Sub-total	42,747	40,548	37,441	39,500	40,059	100%
POULTRY	Chicken (native, broiler, layers)	524,258	528,358	542,914	642,450	559,495	100%
	Ducks	2,660	-	-	-	665	0%
	Turkey	-	-	-	400	100	0%
	Pet Birds	-	-	-	2,100	525	0%
	Geese	-	-	-	300	75	0%
	Dove / Pigeon	-	-	-	1,800	450	0%
	Sub-total	526,918	528,358	542,914	647,050	561,310	100%
	TOTAL	612,412	609,454	617,796	726,050	641,428	

Source: Agricultural Productivity Office/City Veterinary Office

Similarly on slaughtered animals, hogs account highest at 85% to total indicating that pork is the favorite meat choice. Cattle for beef ranks next contributing 11%, goats for chevon contributes 2% and the remaining 2% is shared by other livestock like carabaos, horse and ostrich. With this number requirement of animals for slaughter, the city can only provide about 26% for its hog requirements annually and approximately 67% for cattle based on the inventory. Only goats are more than enough and sufficient to meet the needed requirement for slaughter.

Table 4.21
Slaughtered Animals by Specie
Cagayan de Oro City

SPECIE	2007	2008	2009	2010
Cattle	10,419	10,003	11,637	11,123
Carabao	340	346	454	437
Horse	562	535	532	663
Goat	2,047	2,057	2,128	2,761
Hogs	78,256	74,761	81,009	86,279
Ostrich	488	534	447	295
TOTAL	92,112	88,236	96,207	101,558

Source: Agricultural Productivity Office/City Veterinary Office

This goes to show that the deficiency of about 74% required of hogs for slaughter are sourced from outside the city and comes from the neighboring municipalities in the west from Opol, El Salvador and Laguindingan of the province of Misamis Oriental. Likewise, considerable supply also comes from the Zamboanga and Cotabato provinces as well as the province of Bukidnon. For cattle, although about 64%-68% of its slaughter requirement could be locally- sourced based on the inventory, it is noteworthy to consider that most of these cattle are raised primarily as working animals and production for consumption purposes are basically treated as secondary. So that, it is estimated that about 50% or more of cattle required for slaughter come from the nearby provinces of Bukidnon, Misamis Oriental and Lanao del Norte.

3. Fishery and Aquaculture

The city has eleven (11) coastal barangays extending a distance of 21.062 km.-length from east to west. Mainly, supply of fishery products for local consumption comes from the neighboring municipalities of Misamis Oriental and other regions of Mindanao (Zamboanga Peninsula and Socksargen). The city's minimal produce of fishery and other aquatic products are sourced through sustenance fishing that include common species like tamban, bangus (milkfish) and tilapia.

Table 4.22
Existing Fishing Grounds and Aquaculture Production, CY 2011
Cagayan de Oro City

FISHING GROUNDS	BARANGAY	Production		Product Market	
		Volume (in MT)	Value (PhP)	Local	Export
Marine					
1. Sea	11 Coastal Barangay (Macajalar Bay)	100.02 mt.	7,501.50	100% Local Market	-
2. Bay					
3. Gulf					
Inland					
1. River	Kauswagan, Puntod, Balulang, Carmen	0.972 mt.	48.60	100% Local Market	-
2. Lakes					
3. Marshes/Swamps					
4. Fishponds	Pagatpat	0.047 mt.	3,760.00	100% Local Market	-
5. Cages	Tablon (3rd Cropping)	1.92625 mt.	83,000.00	100% Local Market	-
	Agusan (3rd & 4th Cropping)	2.837 mt.	255,330.00	100% Local Market	-

Source: Agricultural Productivity Office

B. Forestry

Area covered as forest lands account 36,861.47 hectares or roughly 64% to the total land area of the city. Production forest accounted 88% (32,604.57 has.) to the total forest cover, while classified as protection forest make-up the remaining 12% or 4,256.90 has. (Table 4.23). Existing economic activities from production forest include fruit trees/orchard (durian and mango plantation), rattan production, rubber and gmelina plantations with a total of twenty-six forest concessionaires granted to operate approximately 714.50 hectares. To these, the following reforestation and conservation programs and activities are implemented to replenish the utilization of resources: Distribution flow of forest products from the area are brought directly to local processors like CATIMCO, Alwana and other small wood processors in the city.

Table 4.23
Area and Location of Forestlands by Sub-Category and Primary Use
Cagayan de Oro City, 2010

Category	Location	Area (has.)	Percentage
A. PRODUCTION FORESTS *			
1. Timber Production (Natural)	Malasag & Dansolihon	3,497.82	
2. Timber Production (plantations)	CBFMA & ISF Areas	769.00	
3. Agro-Forests		250.00	
4. Pasture/Grazing Land	Bayanga, Dansolihon, Tablon	257.00	
5. Mineral Areas	Tagpangi, Pagalungan, Tumpagon, Taglimao	312.30	
6. Watershed Areas	Iponan, Cugman, CDO River Basin, Agusan	10,365.75	
7. Community-Based Forest Mgmt. Area	Dansolihon, Tagpangi, Balubal, Tablon, Pagatpat	12,901.35	
8. Other Special Uses (tourism, fish farms/ponds)		4,251.35	
Sub-Total		32,604.57	88%
B. PROTECTION FORESTS			
1. NIPAS Areas	<i>(There are no areas declared as protected areas under NIPAS within CDOC)</i>	-	
2. Non-NIPAS Areas:	Cugman, Macahambus, Tagpangi, Taglimao, Tuburan, Pigsag-an, Tumpagon and Dansolihon	4,256.90	
Sub-Total		4,256.90	12%
GRAND TOTAL		36,861.47	100.0%

Table 4.24
Volume of Production by Forest Concessionaires, 2012
Cagayan de Oro City

Forest Concessionaire		Area Covered (has.)	Dominant Tree Specie/Other Products Derived	Production		Estimated Number of Workers	Reforestation Activities
				Total	Value		
1	By Admin	36.5					Watershed Area Dev't.
2	By Admin	109					Upland Tree Plantation Project
3	Plantation Timber Product Assn.	50					Upland Tree Plantation Project

CLUP Volume 3 – The Sectoral Studies

4	WDC	50					Rattan Plantation
5	Palalan Forest Developers Assn.	55					Upland Tree Plantation Project
6	Lumbia FA	5					Gmelina Plantation
7	-do-	5					Mango Plantation
8	Tagpangi MPC	20					Durian Plantation
9	Pagalungan MPC	9					Mango Plantation
10	Tuburan TRISA	6					Mango Plantation
11	Tumpagon FA	6					Durian Plantation
12	Besigan FA	6					Durian Plantation
13	TUDAHIDUFA	8					Upland Tree Plantation Project
14	-do-	10					Upland Tree Plantation Project
15	-do-	10					Upland Tree Plantation Project
16	-do-	10					Upland Tree Plantation Project
17	SCUFA	4					Upland Tree Plantation Project
18		79					Refo/Agro Project
19		40					Rubber Plantation
20	TREISA-WAB	20					Refo/Agro Project
21		66					Refo/Agro Project
22	FSCISFFA	5					Com. Resource Mgmt. Project
23	BUEMAHIFA	15					Com. Resource Mgmt. Project
24	BFA	50					Greening Project
25	BUEMAHIFA KAB-UTT LAHIDUFA	30					City Refo Project
26		10					Greening Project
TOTAL		714.5					

Since crop production is more concrete in terms of areas, only then are indicated in years 2009 to 2011 in the data below. No sufficient statistics could figure in for livestock and fishing especially that the city is not endowed with voluminous and first class fish variety. The area for forest product is at 20,128.06 has. in 2011.

Table 4.25
Area Utilization of Significant Agricultural Activities
Cagayan de Oro City

Activities	2009		2010		2011	
	Area (has.)	%	Area (has.)	%	Area (has.)	%
Crop Production	8,582.70	15%	6,659.40	12%	9,341.00	16%
Livestock and Poultry	-	-	-	-	-	-
Fishing	-	-	-	-	-	-
Forest Product	-	-	-	-	20,128.06	35%

Source: Agricultural Productivity Office/City Veterinary Office

It is noted that farmers in the city prefers to plant corn than its staple mate, the rice, as substantiated by the area for planting and its total production in metric tons for corn. Red squash, ampalaya and upo are the top three most produced vegetables for 2011. For root crops, it is the humble luya that tops the production at 212 metric tons, while banana and mango is the most produced fruits with 1,926 m.t. and 1,119 m.t. respectively. Coffee is still the inherent industrial crops producing 565 m.t. compared to abaca at only 64 metric tons.

Table 4.26
Agriculture and Fishery Resources Utilization Analysis (CY 2011)
Cagayan de Oro City

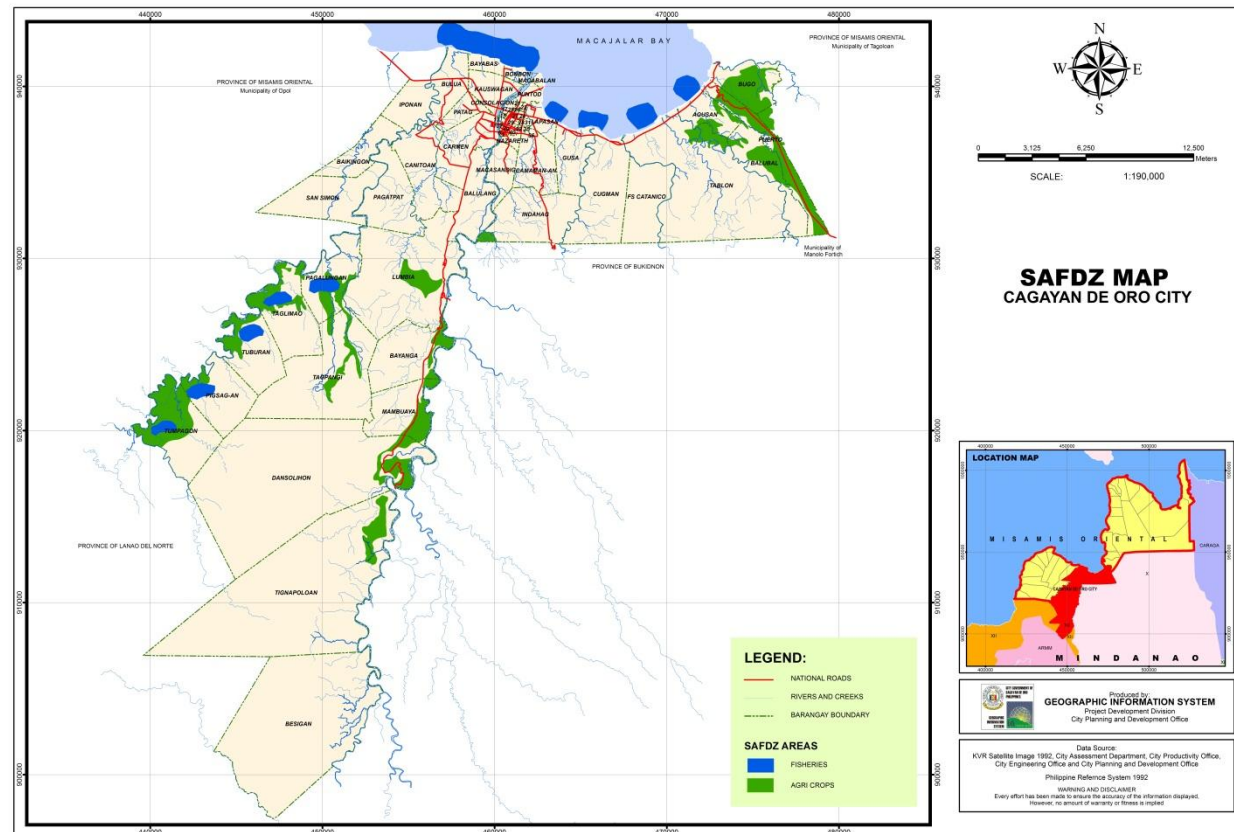
COMMODITIES	AGRICULTURAL PHYSICAL AREA (IN HECTARES)		PRODUCTION (M.T.)		LIVES TOCK / POULTRY (HEADS)	NO. OF LOCAL PEOPLE ENGAGED IN COMMODITY PROD'N		
	Cultivated	Potential	Total			Owner-Tiller	Tenant-tiller	Laborer
Rice	84.00	367	370	397		53	53	35
Corn	2,132.00	1,105	3,237	7490		917	385	165
Vegetables:								
Eggplant	104.00	144	248	721		88	66	39
Pole sitao	57.00	52	109	537		64	36	26
Red Squash	102.00	140	242	1993		79	30	48
Ampalaya	63.00	60	123	1013		49	32	36
Cucumber	40.00	51	37	483		40	26	20
Okra	50.00	27	77	416		25	30	30
Upland Kangkong	28.00	27	55	484		36	38	33
Pechay	29.00	28	57	223		40	35	34

CLUP Volume 3 – The Sectoral Studies

Upo	12.00	20	32	805				
Sayote	66.00	32	98	49		100		
Sweet Pepper	4.00	8	12			24	15	13
Tomato	8.00	78	86	150		14	15	18
ROOT CROPS:								
Cassava	554.00	445	99	8995		412	43	284
Sweet potato	125.00	30	155	882				
Gabi	50.00	20	70	250				
Lutya	192.00	20	212	1018				
FRUITS:								
Banana	1,226.00	700	1,926	13131		717	138	153
Mango	659.00	460	1,119	5590		253	112	83
Papaya	39.00	128	167	1500		32	47	61
Pineapple	11.00	40	51	430		35	15	5
Durian	18.00	70	88	28				
Marang	32.00	10	42	117				
INDUSTRIAL CROPS:								
Coffee	48.00	517	565	66				
Abaca	14.00	50	64	28		32		
FISHERY:	35.00	5	40	131		1,000	53	

Source: Agricultural Productivity Office

Page 158



Disaster Risk Assessment

There were 2,417 farmers affected by the TS Sendong covering a total crop production area of 1,203.499 hectares and 666 livestock heads of swine, cattle, goats, horses, carabaos and poultry combined. The rural barangays of Balubal, Tignapoloan, Besigan, Balulang, Canitoan and Dansolihon sustained the most damages in agriculture and forestry.

For the fishery subsector, there were 15 motorized and 44 non-motorized fishing boats washed out by the flood. Fishing paraphernalia lost to the flood included 21 fishing nets and four multiple handlines. There were also twenty fishponds, three fish shelters and nine urban aquaculture farms damaged by the said typhoon.

The total damage to AFF was estimated at PhP40.24 million or about 17.48 percent to the total reported damages.

DEVELOPMENT NEEDS/ Requirements and Regulations:

1. Identified production barangays: Bayanga (150 has.), Lumbia (90 has), Agusan (100 has), Baikingon (80 has), Besigan (300 has), Camaman-an (30 has), Canitoan (80 has), Carmen (15 has), Taglimao (80 has), Pigsagan (150 has), Balulang (15 has), Tignapoloan (150 has), Dansolihon (200 has), San Simon (150 has), Pagatpat (120 has), Mambuaya (120 has), Pagalungan (180 has), Tagpangi (120 has) and Tuburan (200 has) with a total area of **2,330 has.**
 - Intensify crop production and productivity of 17 rural and primary farming barangays (exception of barangays Carmen and Balulang in the above-list);
 - Constantly develop sustenance fishing (inland) to augment fishery productivity at potential areas and where there is applicable resources like lakes and rivers;
 - Regulate/allow limited production (backyard scale) of livestock specifically for swine and cattle at the hinterlands;
 - Use of premium and introduced tree species for reforestation of \identified areas;
 - Constantly enforce tree growing for reforestation at the barangays to sustain the National Greening Program by requiring NSTP to facilitate
2. Identified green belt areas on urban greening at; Poblacion-Capistrano Street, Velez Street, Corrales Ave., J.R. Borja Street, Osmeña Street, Gaabucayan Street with a total area of 13.5 has
 - Establishment of green belt areas/urban greening
 - Rehabilitation and maintenance of existing planted trees

- Additional areas to be planted with ornamental plants in planter boxes
3. Isla de Oro (8.85 has), Isla Bugnaw (4.1 has), Isla Baksan (2.3 has) with total area of 15.25 has
- Develop forest park specially in no build zone identified areas
 - Establish river protection dikes and planting of bamboo trees, talisay trees and lambago trees and pagatpat trees along the river banks
 - Planting of endemic/hardwood trees for future seedbank and tree repository
4. Riverbanks-Cagayan de Oro river, Iponan river, Umalag river, Bigaan river, Tablon river, Agusan river, Puerto river, Besigan river, Tignapoloan river, and Cugman river with a total area of 225 linear kilometers
- Strict implementation of the National Greening Program
 - Adoption of watershed characterization and management plan
 - Implement reforestation in watershed areas
 - Require NSTP to facilitate tree growing for all freshmen students
 - Enforce tree growing in the barangay
 - Intensify rehabilitation and establishment of riverbank vegetative measure
5. Identified mangrove areas at barangays: Bayabas (10 has.), Bonbon (15 has.), Tablon (10 has.), Cugman (15 has.), Bugo (5 has.), Bulua (8 has.), Gusa (5 has.), Kauswagan (5 has.), Puntod (0.5 has) with a total area of **89.5 has**. Additional area for mangroves with consideration to proposed coastal highway
- Inventory/assessment and reversion of abandoned fishpond areas to mangrove (RA 8550)
 - Rehabilitation of mangrove areas
 - Preservation of wetland areas
 - Preservation of wetland areas
 - Strict implementation of the Wild Life Conservation Program pursuant to RA 9147 (wild life act)
 - Inventory and enhancement of flora and fauna
 - Identification, protection and conservation of critical habitats (caves, wetlands, river systems, natural and built heritage areas)
 - Enforce of beach rehabilitation program pursuant to EO 533
 - Adaptation and implementation of the City Integrated Coastal Management (ICM) Plan pursuant to EO 533
 - Implementation of water easements (3m in urban, 20m agric. Area as per Water Code 1067)
 - Declaration and management of marine protected areas

- Enactment of Local Fishery Code in conformity with RA 8550
- Enactment of Coastal Zoning Ordinance and integration to CLUP

Table 4.27
Technical Findings

Observations	Explanations	Implications	Policy Options
Low farm and agricultural productivity	<ul style="list-style-type: none"> • Diminishing agri-lands due to conversion to other uses • Inadequate and non-functional irrigation facility • Farm-to-market roads are not passable during bad weather due to poor maintenance • High cost of farm inputs • Lack of post-harvest facilities (warehouse, cold storage, etc) • Preference of farmers to engage in mining activities due to quick earnings 	<ul style="list-style-type: none"> • Insufficient production/ productivity • Low and insufficient income • Food supply and requirements of the city is not secured • High Production Cost • Post-harvest losses • Environmental degradation • Farm cultivation is not managed 	<ul style="list-style-type: none"> • Harmonization of policies among concerned government agencies • Establishments of food terminals • Promote value adding • Maintenance of FMRs • Development of rural road network linking to primary farming areas for the 270 km. length of FMR (allocation of funds) • Implement organic farming • Provision of post-harvest facilities
Depleting fish productivity, other marine and coastal resources	<ul style="list-style-type: none"> • Poor condition of habitat • Degraded condition due to water pollution and improper solid waste disposal • Illegal fishing practices • Catching of immature species • Lack of alternative livelihood • Immediate earnings to cover up insufficient income 	<ul style="list-style-type: none"> • Low fish catch • Reduced marine and other coastal resources productivity • Flooding • Loss of lives and properties • Environmental risks • Damage to ecosystems 	<ul style="list-style-type: none"> • Implement SALT/contour farming • Rehabilitation of fish sanctuaries • Strengthen measures for Bantay Dagat and PNP in enforcing coastal and environmental laws • Strictly implement or enforce environmental laws and regulations • Conduct of regular monitoring against continued illegal fishing • Establish fishing moratorium
Tree cutting for: <ul style="list-style-type: none"> • Firewood(household /commercial use) • Timber/Lumber 			
Unregulated mining activities	<ul style="list-style-type: none"> • Water pollution and contamination • River siltation and sedimentation • Attractive earnings from mining • Lack of monitoring on mining activities 	<ul style="list-style-type: none"> • Incidence of mining-related diseases 	<ul style="list-style-type: none"> • Strict enforcement of mining and other environmental laws • Strengthen task force Iponan river • Introduction of alternative livelihood • Creation of the City mining regulatory board • Regular monitoring,

			<p>control, and surveillance (MCS)</p> <ul style="list-style-type: none">• Involvement/deputation of barangay officials in the enforcement of mining and other environmental laws• Empowering the local residents in safeguarding the environment• IEC• Identification/designation of allowed mining areas
--	--	--	---

PROGRAMS AND PROJECTS

Production Support

1. Crop Production and Productivity Program

1.1 Orchard/Fruit Productivity Program (365, 810 trees @ 8m x 8m planting distance-seedling requirement)

- Conduct IEC on Environmental Awareness
- Establishment of barangay nursery in coordination with the City Agriculture Office for fruits trees' seedling propagation
- Maintenance/monitoring by barangay farmer- beneficiaries on planted/grown fruit trees
- Provision of planting materials and technical assistance to the barangay for its maintenance activities

2. Small-scale/Backyard Livestock and Poultry Raising

3. Fishery Development Program

Fish Sanctuaries Rehabilitation (14.5 hectares) at barangays:

- Puerto
- Tablon
- Gusa
- Lapasan

Mangrove Reforestation and Rehabilitation (223,750 seedlings @ 2m x 2m planting distance)

- Establishment of barangay nursery for mangrove seedling propagation
- Provide technical assistance and planting materials to mangrove nursery areas
- Massive planting in coordination with the fisher folks associations

and NSTP

- Enact Ordinance declaring Mangrove Plantation Projects (MPP's) as Marine Protected Areas (MPA's)
- Assign mangrove caretakers for the maintenance and monitoring
- Implementation of the City Integrated Coastal Management (ICM) plan pursuant to EO 53

Forestry and Mining

Urban Greening (total distance-13.5 km; total hills-6,750 @ 2m planting distance)

- Conduct IEC on Environmental Awareness
- Establishment of green-belt in partnership with business establishments in the area as a Corporate Social Responsibility (CSR)
- Provide technical assistance to business establishments in growing trees and its maintenance activities
- Business establishment owners to participate on tree growing within their area of responsibility as requirement for renewal of business permits
- Annual tree growing contest
- Strict monitoring and evaluation by the city and barangay levels on tree growing projects

Island Greening

- Conduct IEC on Environmental Awareness
- Linkage with the academe for NSTP students to participate in tree growing as requirement for graduation
- Enjoin private sector, PO's/CSO's to participate in tree growing
- Provision of seedlings and technical assistance to NSTP, PS/ PO's/CSO's
- Strict monitoring and evaluation by the city and barangay levels in tree growing project

Riverbank Greening

- Conduct IEC on Environmental Awareness
- National Greening Advocacy
- Watershed Management
- Reforestation of Watershed Areas

Table 4.28
Agriculture Related Projects, Approved/Funded for Implementation
Cagayan de Oro City, 2012-2016

Name/Type of Project	Type	Location	Proponent (Government, Private, Other)	Estimated Start Date	Estimated Date of Completion
Provision of Seeds	Rice (inbred)	Mambuaya, Taglimao, Canitoan, San Simon	City Gov't.	2012	2016
	Rice (upland)	All Agri. Barangays	City Gov't.	2012	2016
	Corn (OPV)	All Agri. Barangays	City Gov't.	2012	2016
	Corn (Hybrid)	All Agri. Barangays	City Gov't.	2012	2016
	Assorted Vegetable Seeds	All Agri. Barangays	City Gov't.	2012	2016
Provision of Planting Materials (seedlings)	Fruit Trees	All Agri. Barangays	City Gov't.	2012	2016
	Coffee	Besigan, Tignapoloan, Dansolihon, Tumpagon, Pigsag-an, Mambuaya, Tagpangi, Tuburan	City Gov't.	2012	2016
	Banana (Cardaba)	All Agri. Barangays	City Gov't.	2012	2016
	Rubber	Besigan, Tignapoloan, Dansolihon, Tumpagon, Pigsag-an, Mambuaya, Tagpangi, Tuburan, Bayanga, Balubal, Tablon, Taglimao, Pagalungan	City Gov't.	2012	2016

Provision of Fingerlings	Tilapia	Cagayan river, Agusan, Tignapoloan, Dansolihon, Mambuaya, Tagpangi, Tuburan, Bayanga, Balubal, Tablon, Taglimao, Pagalungan, San Simon	City Gov't.	2012	2016
Provision of Bio-Con Agents	Corn	All Agri. Barangays	City Gov't.	2012	2016
Provision of Vermi Worms	Vegetables	All Agri. Barangays	City Gov't.	2012	2016
Rehabilitation of/Improvement of City Nursery	Fruit Trees Seedlings	San Simon	City Gov't.	2012	2016
Production of Organic Fertilizer	Rice / corn HVCC	All Agri. Barangays	City Gov't.	2012	2016
Establishment of Brgy. Nurseries	Fruit Trees	All Agri. Barangays	City Gov't.	2012	2016

4.4 Tourism

SITUATIONAL ANALYSIS

The Golden Friendship City is gifted with twelve Tourism attractions both natural and man-made. Type of attractions offered covers from adventure (white water rafting, zipline, skybridge, rapelling, zorbing and trampoline among others). Recreational activities include aviary, playgrounds, nature and theme parks, and orchidarium. Religious and other adventure of special interest is experienced by crossing nine times the Guadalupe River. Other places for destination are of historical and cultural heritage value like museums, landmarks and memorabilia. In addition, the city hosts to a number of yearly activities and festivals like the Kagay-an festival, Lambagohan festival, Miss Cagayan de Oro Beauty Pageant during the city's annual fiesta celebration, Malasag Trek and Guadalupe River Cross during Holy Week and Halad sa Pasko during Christmas Season. Potential and natural tourism attractions are spotted in barangays Dansolihon (Langag Cave), Tagpangi (Falls), Tablon (Palalan Falls), Lumbia (Spring), Bulua (Spring) and Bayanga (Cave-Cueva de Oro(See Table 4.19).

Table 4.29
Inventory of Tourist Attractions, As of CY 2011
Cagayan de Oro City

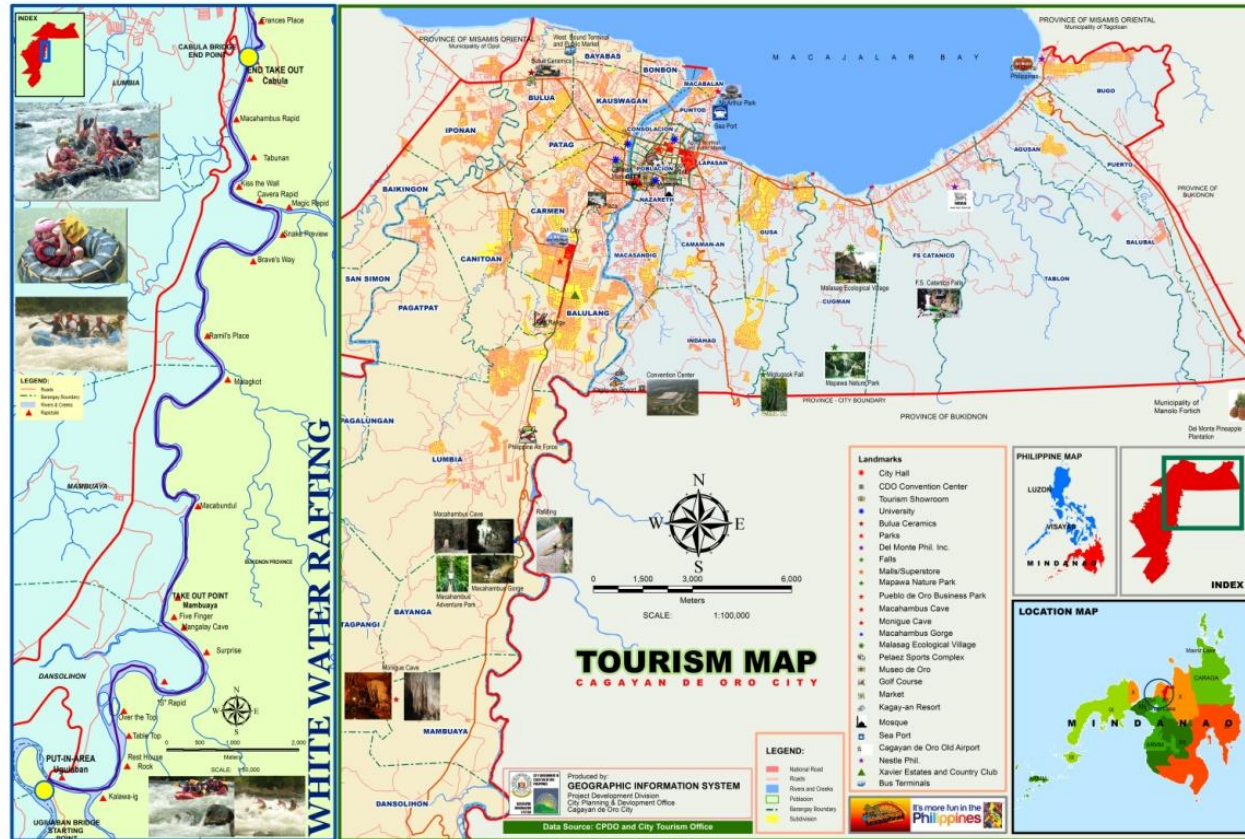
LOCATION (Barangay)	NAME OF TOURISM ESTABLISHMENT	AREA (has.)	TYPE OF ATTRACTION	FACILITIES	OWNERSHIP
Bayanga	Macahambus Cave		Historical Cave, (Natural, Historical)	Viewing Deck	Government
Bayanga	Macahambus Adventure Park		Skybridge (Adventure)	Helmet	Private
			Zipline, Rapelling, (Natural with Man-made)	Harness	
Bayanga	Jatico Adventure Park	5 Has.	Zipline (Adventure)	Parking Area	Private
			Zorbing, Trampoline, Aviary, Playground & Pool (Natural & Man-made)	Restaurant Rest Room Harness	
Cugman	Mapawa Adventure Park	3,000 Has.	Park (Adventure), Zipline, Rapelling, Swimming Pool, Playground (Natural & Man-made)	Picnic Huts Refreshment Area Rest Rooms Parking Area Harness, Helmets	Private
Baikingon	Glonwicks		Zipline Adventure (Natural with Man-made)	Helmet, Harness	Private
Cugman	Gardens of Malasag	7.2 Has.	Theme Park, Native of 7 Tribes	Tour Guide	Government

CLUP Volume 3 – The Sectoral Studies

	Tourism Eco-Village		Orchidarium, Accommodation	House of 7 Tribes	
			(Natural, Man-made, Cultural & Religious)	Restaurant	
Macabalan	Mc Arthur Marker	649 sq.m	Historical Land Mark (Historical)	Parking Area Mini Zoo Rest Room Rest Room Reception Area Swimming Pool	Government Private
Bayanga	Cabula Grill		Special Interest (Man-made)	Restaurant	
Gusa	Guadalupe River Cross		Natural, Religious	Chapel, Picnic Cottages, Nature Park	
Barangay 1	Water Tower City Museum		Museum (Historical) Historical Photos of Cag. de Oro	Rest Rooms	Government
Corrales Extension	Capitol University Museum La Castilla Museum		Museum (Historical)		Private
Kauswagan			Museum (Memorabilia) of Rodolfo N. Pelaez (Historical)		Private

Source: City Tourism and Cultural Affairs Office

Figure 4.4
Tourism Map showing Tourist Attractions
Cagayan de Oro City



The abundant presence of tourism-support establishments with facilities and amenities are available to cater to all types of market-clients all over the city and are very accessible with any modes of transport to and from the airport and seaport.

Table 4.30
Accessibility of Existing Tourism Establishment and Tourist Attraction
Cagayan de Oro City, 2011

NAME OF TOURISM ESTABLISHMENT		MODE OF TRANSPORTATION AVAILABLE	DISTANCE FROM NEAREST AIRPORT	DISTANCE FROM NEAREST SEAPORT	DISTANCE FROM NAT'L HIWAY	ACCESS ROAD		ACCESSIBILITY
						PAVEMENT	CONDITION	
1	Bath & Beyond Pension House	Jeepney/Rela /Taxi	8 kms.	5 kms.	1 m	Concrete	Good	Accessible
2	Casa Crystalla Pension House	Rela / Taxi	9 kms.	5 kms.	1 m	Concrete	Good	Accessible
3	Casa Isabela	Jeepney/Rela /Taxi	9 kms.	3 kms.	100 m	Concrete	Good	Accessible
4	CdO Dream World Pensionne	Rela / Taxi	9 kms.	4 kms.	1 m	Concrete	Good	Accessible
5	Chali Beach Resort	Jeepney/Taxi	15 kms.	6 kms.	30 m	Concrete	Good	Accessible
6	Country Village Hotel	Rela / Taxi	7 kms.	6 kms.	20 m	Concrete	Good	Accessible
7	De Luxe Hotel	Jeepney/Rela /Taxi	10 kms.	6 kms.	1 m	Concrete	Good	Accessible
8	De Oro Inn	Jeepney/Rela /Taxi	9 kms.	5 kms.	1 m	Concrete	Good	Accessible
9	Demiren Hotel	Rela / Taxi	10 kms.	5 kms.	1 m	Concrete	Good	Accessible
10	Discovery Hotel	Rela / Taxi	11 kms.	4 kms.	20 m	Concrete	Good	Accessible
11	El Riva Suites	Rela / Taxi	9 kms.	3 kms.	1 m	Concrete	Good	Accessible
12	Executive Pension	Jeepney/Rela / Taxi	10 kms.	3 kms.	100 kms.	Concrete	Good	Accessible
13	Fems	Jeepney/Rela /Taxi	10 kms.	5 kms.	1 m	Concrete	Good	Accessible
14	Goodnews Traveller Inn	Rela / Taxi	13 kms.	5 kms.	20 ms	Concrete	Good	Accessible
15	Grand City Hotel	Jeepney/Rela /Taxi	9 kms.	5 kms.	1 m	Concrete	Good	Accessible
16	Harbor Lights Hotel	Jeepney/Taxi	12 kms.	2 kms.	20 m	Concrete	Good	Accessible
17	Hightime Inn	Jeepney/Taxi	10 kms.	6 kms.	2 m	Concrete	Good	Accessible
18	Hotel Conchita	Jeepney/Rela /Taxi	10 kms.	4 kms.	50 m	Concrete	Good	Accessible
19	Hotel Koresco	Taxi	3 kms.	9 kms.	100 ms	Concrete	Good	Accessible
20	Hotel Ramon	Rela / Taxi	9 kms.	6 kms.	1 m	Concrete	Good	Accessible
21	IF Koresco Condotel	Taxi	3 kms.	9 kms.	100 ms	Concrete	Good	Accessible
22	Lamar Inn	Jeepney/Taxi	9 kms.	5 kms.	1 m	Concrete	Good	Accessible

CLUP Volume 3 – The Sectoral Studies

23	Limketkai Hotel & Resort	Jeepney/Rela /Taxi	11 kms.	5 kms.	1 m	Concrete	Good	Accessible
24	Malasag Resort Corp.	Taxi	15 kms.	5 kms.	1 m	Concrete	Good	Accessible
25	Mallberry Suites	Jeepney/Taxi	11 kms.	4 kms.	20 m	Concrete	Good	Accessible
26	Maxandrea Hotel	Jeepney/Rela /Taxi	10 kms.	5 kms.	1 m	Concrete	Good	Accessible
27	Metro CdO Inn	Rela / Taxi	14 kms.	5 kms.	20 ms	Concrete	Good	Accessible
28	Mountain Suite Business Apartelle	Taxi	13 kms.	4 kms.	1 m	Concrete	Good	Accessible
29	Oro Capital Inn	Rela / Taxi	9 kms.	4 kms.	1 m	Concrete	Good	Accessible
30	Phil Tourism Authority	Taxi	14 kms.	5 kms.	200 m	Concrete	Good	Accessible
31	Philtown Hotel	Jeepney/Rela /Taxi	10 kms.	5 kms.	20 m	Concrete	Good	Accessible
32	Prawn House Inn	Jeepney/Rela /Taxi	4 kms.	6 kms.	50 ms	Concrete	Good	Accessible
33	Pryce Plaza Hotel	Taxi	5 kms.	6 kms.	100 m	Concrete	Good	Accessible
34	Red Palm Inn	Jeepney/Rela /Taxi	9 kms.	4 kms.	1 m	Concrete	Good	Accessible
35	Reunion Hotel	Rela / Taxi	10 kms.	5 kms.	1 m	Concrete	Good	Accessible
36	Southwinds Hotel	Rela / Taxi	11 kms.	4 kms.	20 m	Concrete	Good	Accessible
37	St. Nicolas Inn	Jeepney/Rela /Taxi	12 kms.	6 kms.	100 ms	Concrete	Good	Accessible
38	The Dynasty Court Hotel	Jeepney/Rela /Taxi	9 kms.	5 kms.	1 m	Concrete	Good	Accessible
39	The Resonance Inn	Jeepney/Taxi	12 kms.	6 kms.	1 m	Concrete	Good	Accessible
40	The River View Inn	Jeepney/Taxi	9 kms.	5 kms.	1 m	Concrete	Good	Accessible
41	Victoria Suites	Rela / Taxi	9 kms.	4 kms.	1 m	Concrete	Good	Accessible
42	VIP Hotel	Jeepney/Rela /Taxi	9 kms.	5 kms.	1 m	Concrete	Good	Accessible
43	Willshire Inn	Rela / Taxi	10 kms.	5 kms.	1 m	Concrete	Good	Accessible
44	Xavier Sports & Country Club	Taxi/Jeepney	4 kms.	7 kms.	100 ms	Concrete	Good	Accessible
45	Yumi Pension House	Rela / Taxi	9 kms.	7 kms.	1 m	Concrete	Good	Accessible
46	Zealep Hotel	Jeepney/Rela /Taxi	8 kms.	5 kms.	1 m	Concrete	Good	Accessible

Source: City Tourism and Cultural Affairs Office

Report on occupancy rate as of 2010 indicated that accommodation to dormitories account 69.17%, tourist inns (59.95%), apartelles (58.59%), first class accommodations (56.61%), pension houses (48.82%) make up the top five mostly availed by market-clients.

Travellers-by-type in 2010 has domestic travel registering highest with 352,977; foreign travel ranking next with 41,911 while balikbayans account for only 5,412.

Hotel functions by type of utilization reported local functions as highest with 4,107; followed by regional level (312), national (138) and international (32).

Seminars/meetings and conferences top the list of functions with 4,011 in 2010 with a corresponding 122,559 total delegation. Conventions account for 176 with 25,313 delegates. Other types like special events (birthdays, weddings, baptismal etc.) account for 402 with a total of 134,475 delegates.

Table 4.31
Facilities in Existing Tourism Establishments and Market Catered
Cagayan de Oro City, 2006-2010

HOTEL	2006	2007	2008	2009	2010
First Class	16.78%	28.39%	86.17%	77.77%	56.61%
Standard	17.63%	17.63%	87.54%	75.29%	48.73%
Economy	14.20%	28.45%	85.39%	61.75%	42.52%
Tourist Inn	10.73%	29.26%	69.13%	78.13%	59.95%
Dormitory	x	x	72.16%	70.24%	69.17%
Apartelle	x	31.31%	88.34%	91.19%	58.59%
Pension House	x	x	86.80%	82.28%	48.82%

SUMMARY REPORT ON TRAVELERS

	2006	2007	2008	2009	2010
Others/Unspecified Residence	7,068	2,713	1,211	4,116	2,730
Foreign Travelers	17,249	21,060	14,807	24,786	41,911
Domestic Travelers	266,897	248,583	233,870	330,334	352,977
Balikbayan	6,290	2,147	885	2,806	5,412

SUMMARY REPORT ON HOTEL FUNCTION

CLASSIFICATION	2006	2007	2008	2009	2010
Local	2,708	3,160	1,625	2,795	4,107
Regional	228	225	99	102	312
National	114	62	47	217	138
International	2	x	229	50	32
NO. OF FUNCTIONS					
Seminar/Meetings	1,519	2,004	1,005	1,448	4,011
Convention	27	93	21	77	176
Others	1,204	1,412	757	1,675	402

NO. OF DELEGATES					
Seminar/Meetings	25,129	74,581	52,918	102,407	122,559
Convention	7,046	10,297	4,164	23,212	25,313
Others	91,941	91,192	83,522	165,092	134,475

Source: City Tourism and Cultural Affairs Office

Figure 4.5
Tourism Map showing Tourism Establishments
Cagayan de Oro City

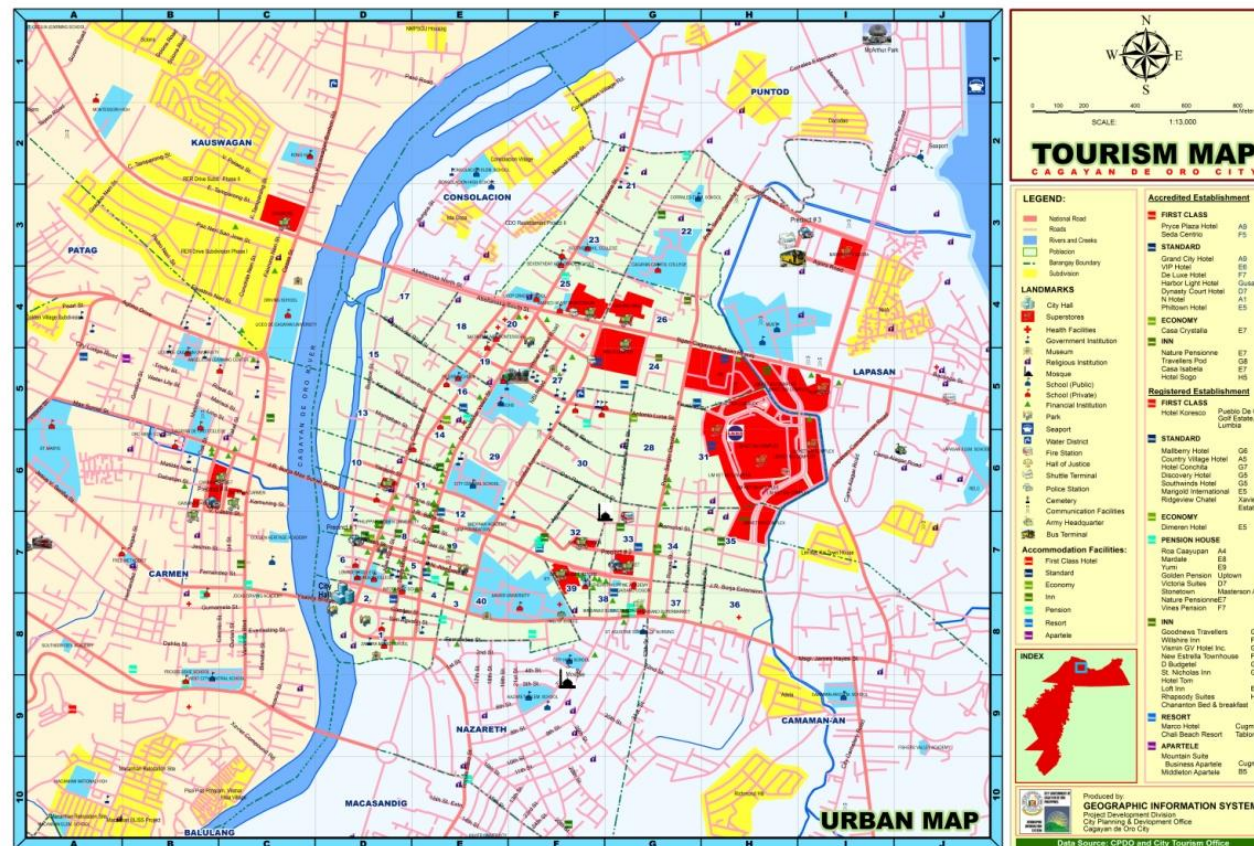


Table 4.32
Number of Tourism Facilities/Accommodations by Type, CY 2007 – 2011
Cagayan de Oro City

Type	2007	2008	2009	2010	2011
Hotels	17		16	22	25
Suites	1		1	5	6
Inns	7		7	11	18
Casas	-		2	3	3
Pension Houses	2		1	7	9
Lodging Houses	-		1	2	4
Others	-		2	6	5
Apartelle	1		1	2	2
Chalets	1		1	1	1
Total	29		32	59	73

Source: City Tourism and Cultural Affairs Office

As of first quarter this year of 2012, support services for tourism showed that a total of thirty-four (34) travel agencies are registered and accredited with the City Tourism readily accessible by market-clients through foot traffic or online bookings.

Inventory of Tourism Support Facilities and Services, Year 2012

Table 4.33
REGISTERED TRAVEL AGENCY 2012
As of February 29, 2012
Cagayan de Oro City

ESTABLISHMENTS		ADDRESS	CONTACT NUMBER	MANAGER	SURETY BOND INSURANCE	EXPIRY DATE
1	A2Z Business and Travel Resources	# 112 17th St. Nazareth	857-7238	Sheryl Asombrado	Stronghold	January 19, 2013
2	Bohemian Express Travel and Tour	Dr. No. 10 Pelaez Blvd. Kauswagan, CDO	858-1554/71-43-32	Ma. Teresa M. Picardal	The Mercantile Ins. Company	February 23, 2013
3	CDO Travel & Tours	Unit 5 Consuelo Arcade Corrales St. CDO	856-8403	Jose Bonita	Intra Strata	October 24, 2012
4	E connect Travel & Tours	Room 220 De Leon Plaza Yacapin/Velez St. CDO	72-38-07	Emelia O. Dalonoy	Stronghold	January 18, 2013
5	Grandscape Travel & Tours	# 137 G/F SM City Upper Balulang, CDO	859-1236/859-1515	Marina L. Mabago	The Mercantile Ins. Company	January 19, 2013
6	Golden Aero Travel and Tours	Door # 2 Tumang Bldg. Capistrano/ Yacapin	852-4240/856-8409	Dennis Jose Pimentel	Commonwealth Ins. Comp.	January 19, 2013
7	JHA Travel & Tours	Zone 2, Patag, CDO	857-5795	Lyn T. Abut	Phil Phoenix Surety Insurance Inc.	January 05, 2013
8	JCT Travel & Tours	Blk. 11 Lot 8 Silver Creek Carmen, CDO	851-9511	Charisse T. Liscano	Stronghold	August 18, 2012
9	Konsturs Travel & Tour	Big R, Limketkai Brgy. 31, CDO	856-8998/856-5278	Patricia Ochiko	Phil Phoenix Surety Insurance Inc.	May 11, 2012
10	Lantaw Promotional Tour & Advertising Agency	112 De Leon Plaza Bldg. Yacapin/Velez St. CDO	74-55-32	Marilyn Banaag	The Mercantile Ins. Company	October 04, 2012
11	MCM Worldwide Travel Planner	RER Kauswagan, CDO	858-1109	Ma. Cristina Masilungan	Stronghold	February 01, 2013
12	Orient Global Travel & Tours	# 201 Zone 4 Corrales Ext. CDO	858-1129	Adonis Agcopra	Commonwealth Ins. Comp.	January 31, 2013
13	Pack & Go Travel and	G/F Press Club Bldg. Luna St.	857-8044	Kristin Bangot	Stronghold	February 14, 2013

CLUP Volume 3 – The Sectoral Studies

	Tours	CDO				
14	Regatta Tours	Montblanc Bldg. Burgos/Chaves St. CDO	309-8645	Julie M. Baril	Sterling Ins. Comp.	January 25, 2013
15	Saga Travel & Tours	Room 205 CKY Center Capistrano, Chavez St. CDO	856- 3770/231- 4804	Samuel Sabenecio		April 16, 2012
16	Seven Stars Travel & Tours	2/F De Leon Plaza Bldg. Yacapin/Velez St. CDO	72-79-18/856- 7040	Concepcion Jariol	Stronghold	January 25, 2013
17	Sunny Sky Travel & Tours	Unit 102 Damasing Bldg. Velez/Cruz Taal St. CDO	323- 2621/857- 7283	Judith Damasing	Stronghold	January 19, 2013
18	Swift Travel & Tours	14 G/F Pelaez Sports Center CDO	72-76-29/857- 3879	Tito Noel Mora	Commonwea lth Ins. Comp.	February 24, 2013
19	Titan Travel & Tours	G/F VIP Hotel Velez St. CDO	856-1997/72- 74-20	Mac Duffie Tan	Milestone Guaranty Assurance Corp.	January 24, 2013
20	Tourmakers Phil. Inc.	144 Domingo Neri St. Phase 1, RER Kauswagan	71-01-85/856- 5278	Ma. Cecilia Rodriguez	The Mercantile Ins. Company	November 15, 2012
21	Travel Depot	12-20th Nazareth, CDO	856-8597	Cecilio C. Capistrano	Phil Phoenix Surety Insurance Inc.	February 18, 2013
22	Tourist Depot Travel & Tours	#2 Ramon Chaves St., CDO	857-4073	Christy Lepanto	Commonwea lth Ins. Comp.	January 24, 2013
23	V Tours & Travel	56-A Gumamela Ext. Carmen, CDO	309-5581	Emilio Lulu Vallecer	Stronghold	November 24, 2012
24	Wow Camiguin Travel and Tours	Room 2&3 3rd Floor, Goodwill Bldg., Rizal St. CDO	310-0698	Tiburcio M. Palasan	Phil Phoenix Surety Insurance Inc.	September 28, 2012

Table 4.34
REGISTERED TRAVEL AGENCY 2012
As of March 2012
Cagayan de Oro City

ESTABLISHMENTS		ADDRESS	TELEPHONE NO.	CONTACT PERSON	SURETY BOND INSURANCE	EXPIRY DATE
1	Nette Travel & Tours	Yacapin- Velez Sts. CDO	857-7717	Ramonita A. R.		March 01, 2013
2	TRIP! Travel & Tour	Tiano-Yacapin	857-8211/231-5845	Ritchie M. Tan		March 01, 2013
3	Hemisphere Travel & Tours	Lapasan Hi-way, CDO	852-4935/309-1134	Myrna P. Famor		March 12, 2013
4	Comfortable Travel & Tours	# 134 G&B Mordeno Bldg. Pabayo/Hayes Sts.	+69334731744	Chonalyn Estrada		March 27, 2013
5	Ramiga Travel & Tours	2/F KM Bldg. Rizal-Gomez Sts.	309-4534	Rafael Pedro C. Baculio		April 03, 2013
6	Creatives Leisure Travel & Tours	Zone 1 Vamenta Blvd., Carmen		Nancy B. Coloma		April 02, 2013
7	Khariz Travel & More	RM 209B, Pilgrim Christian College, Tiano-Akut Sts. CDO	309-6235	Eduard Calumpang		April 26, 2013
8	Integrity Travel International Co.	Door 3 Roa Bldg., Mabini St., CDO	852-0047	Teresita Garvida		May 02, 2013
9	PHILCAR Travel & Tours	Capistrano cor. Mabini	855-5934	Carol T. Manalo		May 04, 2013
10	VIAJEMONDO Travel & Consultancy Services	#456 Capt. Jabulin St., Iponan, CDO	850-8973	Linda Labalan-Mondoñedo		October 01, 2012

Source: SEP 2012

Table 4.35
List of Restaurants in Cagayan de Oro City as of 2012

Business Name	Address	Telephone No.
Agua Seafood Restaurant	Rosario Strip, Limketkai Center	309-2808
Ambrosia Restaurant	Koresco Hotel, Lumbia	859-2299
Annabelles Indoor/Outdoor Restaurant	Ridgeview Chalet	856-2655
Aroma Cafe	Stonestown Suites	858-3854
Bagong Lipunan Restaurant	1.A. Velez -Yacapin Streets	726-470
	2. Bulua	737-224
	3. Hayes Street	723-475
	4. Lapasan	723-062
Barkadahan Grill	1. T. Neri - Pabayo Streets	856-8484
	2. JR. Borja Extension	714-222
	3. Centrio Mall, Ayala	0942-5548002
	4. Prima Vera, Upper Carmen, SM	850-0191
Bigby's Cafe	1.Rosario Strip Limketkai Center	857- 5511
	2. SM City Ground Floor, Upper Carmen	859-1358
	3. Centrio Mall, Ground Floor N Hotel	09176773297
Bon Cafe		880-1924 to 25
Bo's Coffee	1. Rosario Arcade, Limketkai Center	856-9554
	2. Hayes-A. Velez Streets	855-3999
Brew Berry Café	Chavez-A. Velez Streets	725-291
Buffalo Resto Grill	A. Velez Street	859-2152/724-278
Butcher's Best Barbecue	1.Hayes-Velez Streets	852-4258
	2. Corrales-Hayes Streets	857-7333
Café Cagayan Restaurant	1. Pryce Plaza Hotel, Carmen Hill	858-4537/858-3111
Café Espezo	Josephina's Grill, Carmen Hill	-
	Pearlmont Inn	738-504
Café Laguna	Mallberry Suites, Limketkai Center	858-2999
Cagayan River View Inn	Vamenta Boulevard, Carmen	858-4245/729-039
Candy's Café	1. Rosario Arcade, Limketkai Center	856-8100
	2. Centrio Mall, Ayala	732-929/ 732-840
Chali Beach Resort & Restaurant	Cugman	726-565/310-0125
Chicken Inasal (Bacolod Style)	Tiano-Makahambus Streets	856-2240
Coffee Works	1.Rosario Strip, Limketkai Center	856-2514
	2. Corrales, Divisoria	728-953/856-5389

Country Side Steak House	Rosario Arcade Limketkai Center	858-3004 to 06
Country Village Hotel & Restaurant	Vllarin St., Carmen	856-2631
Chowking	1.Limketkai Center	856-5988
	2. Gateway Tower1, Limketkai	856-3309/711-106
	3. Gaisano Mall	857-5907/711-827
	4. R.N. Abejuela-Rizal Sts.	726-000
	5. A. Velez- C.M. Recto Sts.	856-9136
	6. Gusa	859-1144
	7. SM City	323-1326
	8. Centrio Mall, Ayala	727-623/724-803
		856-2036
Café Lady Bea	Southwinds Hotel, Capt. V. Roa Street	856-5389
		723-621
Countryside Steak House	Big R Limketkai Center	723-637
Cuadra Family KTV Bar & Restaurant	Tiano Bros.-Kalambaguhan Streets	856-9168
Cucina de Oro	Limketkai Drive	856-4914
Dear Manok Grilled Chicken House	1. Tiano Bros.-Akut Streets	857-3413
	2. T. Chavez-Capistrano Sts.	856-1397/ 727-391
Demiren Hotel & Restaurant	Tiano Bros.-Kalambaguhan Streets	859-2860
Dimsum Diner	SM City, Upper Carmen	858-3896
Discovery Hotel & Restaurant	Osmena-Florentino Streets	727-320
Dunkin Donuts	1.Limketkai Center	856-7555
	2. R.N. Abejuela Street	725-005
	3. Puerto	855-3987
	4. Agora	856- 1555
	5. Gaisano Mall	726-816
	6. Carmen	858-1715
	7.Elpe Park, Kauswagan	858-8555
Dynasty Court Chinese Restaurant	Tiano Bros-Hayes Streets	727-908,857-1250, 857-4802
Eco Village Restaurant	Malasag Hill, Cugman	309-3752,856-6183
Figaro Coffee	Rosario Arcade, Limketkai Center	856-3843/856-7743
Filter Restobar	Tiano-Hayes Streets	745-855
Golden Ajirang-I Korean Restaurant	C.M. Recto Avenue	727-876/856-5271
Golden Cowrie	1. Rosario Arcade, Limketkai Center	856-4457
	2. Centrio Mall, Ayala	0922-8134319
Goldilocks	1.Limketkai Center	856-2264
	2.R.N. Abejuela Street	757-7578,757-7579
	3.Kauswagan	858-5078
	4. Gaisano Mall	856-4477
Gloria Maris Restaurant	Limketkai Center	856-7579
Grand Caprice Restaurant	Limketkai Center	726-955,724-986

Green Haven Vegetarian Restaurant	Limketkai Center	856-2476
Greenwich Pizza Corp.	1. Limketkai Center	854-2222
	2. Ororama Super Center	720-043
	3. R.N. Abejuela-Pabayo Sts.	-
	4. Gaisano Mall	854-5555
	5. SM	859-3144
Harbor Lights Restaurant	Old Gusa Road	855-6060, 855-1120
Ihaw-ihaw at the Garden	Cagayan River View Inn	858-4245/729-039
Inilog Grill	Kalambaguhan-Tiano Bros. Streets	724-846/723-621
Izzy's Café	4th Floor Gaisano Mall	726-660
	Ground Floor Gaisano City	-
Japanese Grill (outdoor)	Pryce Plaza Hotel, Carmen Hill	726-464/858-3111/858-3131
Jonies Sizzlers & Roast	RN Abejuela-Pabayo Streets	851-1555
Jollibee	1. A. Velez-Tirso Neri Streets	857-5469, 712-064
	2. Corrales Avenue	727-786
	3. Gaisano City	856-7145
	4. Gaisano Mall	721-031, 856-6886
	5. IFI Bulua	855-5595
	6. Kauswagan Highway	735-262
	7. Limketkai Gateway Tower	856-3000
	8. G/F Ororama Super Center, Cogon	722-759, 857-5672
	9. Puerto National Highway	855-2824, 855-2825
	10. SM City, Masterson Ave.	859-2511, 859-2512
	11. Capistrano Street fronting Lourdes College	856-4132
	12. Max Sunniel-Vamenta Boulevard, Carmen	858-4927
	13. Limketkai Mall	856-8663
	14. Georgetown Cyber Mall, Kauswagan	745-008
	15. Market City, Agora, Lapasan	231-3574
	16. Centrio Mall, Ayala	880-0361
Kaon Sa Eskina (275 Balsa)	c/o Philtown Hotel	856-4402
Kagay-anon Restaurant	Rosario Arcade Limketkai Center	729-003, 856-3688
Karachi Restaurant	Tiano-Hayes Streets	850-0103
KFC	1. Entrance Limketkai Mall	856-1366
	2. SM City	859-1142
	3. Centrio Mall, Ayala	323-1384
Kamagawa Japanese Restaurant	Capistrano-Yacapin Streets	856-2259
Kamay-an sa Manokan	Corrales Extension	856-2741
La Tegula Ristorante Italiano	Rizal Street, fronting Gaston Park	858-5959
La Veranda	Harbor Lights Hotel	855-1120/855-6060
La Vetta Restaurant Wine &	Rosario Arcade Limketkai	856-1207

Bar		
Lexis Bar & Grill	Tiano Bros.-Macahambus Streets	714-406
Lighthouse Restaurant	4th Floor Gaisano Mall	856-3221
Lokal Grill & Restaurant	Corrales Ave-Ebarle Sts.	852-1183/852-1182
Mandarin Tea Garden	1. Robinson Center	856-6233
	2. Velez-Pacana Streets	856-4822
	3. Centrio Mall, Ayala	-
Mang Inasal	1. T. Neri Street	323-2416
	2. Limketkai Center	323-2460
	3. Ororama, J.R. Borja Street	323-1150
	4. SM City	859-1878
	5. Gaisano City	323-1151
	6. Agora, Lapasan	323-2595
	7. Centrio Mall, Ayala	323-1147
Marcelino's Diner	Aguinaldo St. cor. Yacapin	857-2158
Marco Cafe	Marco Hotel, Cugman	733-033
Max Restaurant	Big R, Limketkai Center	856-8264, 756-297
Mc Donald's Restaurant	1. Limketkai Center	856-6336, 726-637
	2. Tirso Neri-Tiano Streets	858-6236
	3. Ororama Supercenter	857-6236
	4. Corrales Street	-
	5. Centrio Mall, Ayala	-
Middleton Apartelle Restaurant	Max Suniel-Lirio Streets Carmen	858-2483, 723-665
Mindy's CDO Restaurant	Yacapin-Velez Streets	856-5178, 720-698
Missy Bonbon	1. Rosario Arcade, Limketkai	856-6852
	2. Centrio Mall. Ayala	-
Mom's Corner	Casa Crystalla	726-600/856-1704
Oriental Garden Restaurant	A. Velez-Macahambus Streets	856-4402, 723-089
Pancake House	1. Limketkai Mall	856-7990
	2. Centrio Mall, Ayala	323-4401
Penong's Barbecue Seafoods & Grill	JR Borja-Corrales Streets	309-1834
Petals Restaurant	A. Velez-Luna Streets	856-2047, 856-4320
Pulse	Tiano Bros- Hayes Streets	856-2596
Rai Rai Ken Restaurant	Rosario Arcade Limketkai Center	856-6389
Ralf's Café and Sports Bar	Tiano Bros.-Hayes Streets	09264099494
Ramen Tei	Rosario Arcade Limketkai Center	856-6222
Rosso Resto	Mallberry Suites	855-5959/858-1901
Rhythm Café & Restobar	Cagayan River View Inn	858-4245
Sea King Garden Restaurant	Grand City Hotel	857-2274, 723-551
Sentro 1850	A. Velez Street	854-1850, 731-850
Seoul Korean Restaurant	Stonestown Suites	858-3854
Silver Court Restaurant	Capt. V. Roa Street	857-2145, 859-2512
Sunburst	1. Rosario Arcade Limketkai Center	820-2080
	2. Centrio Mall, Ayala	

Thai Me Up	1. Capistrano-Mabini Streets 2. Centrio Mall, Ayala	738-424,310-8424 323-1174
Tita Fannies	1. Corrales Street near Trinidad Bldg. 2. Hayes Street, Divisoria Lapasan	729-472 09159396474 857-5009/858-1390
The Barn Restaurant	Stonestown Suites	858-3854
Turika Japanese Restaurant	A. Velez Street fronting Grand City Hotel	857-6171
Vienna Kaffehaus	A. Velez-Pacana Streets	856-2505,726-080
VIP Hotel and Restaurant	1. Rosario Arcade, Limketkai	855-9222
Yellow Cab	2. SM City	-
	3. Centrio Mall, Ayala	323-1398
Yuri's Cafe	Corrales Avenue	09331719057

Source: SEP 2011-2012

Tourist arrivals by country of origin from 2006 – 2010 showed that among the top five countries are visitors coming from USA, Japan, Korea, Canada and Australia. Domestic travellers of unspecified places of origin account for about 1.5 million during the last five years.

Table 4.36
Inventory of Tourist by Country of Origin, As of CY 2006 – 2010
Cagayan de Oro City

No.	FOREIGN	NO. OF TRAVELERS	DOMESTIC
1	Australia	1,273	LUZON
2	Austria	23	Manila
3	Belgium	30	Baguio
4	Brunei	19	
5	Cambodia	1	
6	Canada	1,309	
7	China	1,214	
8	Denmark	19	VISAYAS
9	East Timor	-	Cebu
10	Finland	37	Bohol
11	France	69	Iloilo
12	Germany	677	
13	Holland	7	
14	Hong Kong	509	
15	India	219	
16	Indonesia	125	
17	Italy	73	
18	Japan	3,309	
19	Korea	1,500	

20	Laos	-	
21	Malaysia	132	
22	Myanmar	2	
23	Netherlands	77	
24	New Zealand	163	
25	Norway	33	
26	Pakistan	-	
27	Saudi Arabia	52	
28	Singapore	223	
29	Spain	83	
30	Sweden	72	
31	Switzerland	70	
32	Taiwan	252	
33	Thailand	128	
34	United Kingdom	707	
35	USA	4,773	
36	Vietnam	69	
	Others & Unspecified Residence	7,068	
	Total Foreign Travelers	17,249	
	Balikbayan	6,290	
	Sub-Total Foreign Travelers	30,607	
		ADD :	Total Domestic Travelers
	GRAND TOTAL	297,504	

Source: City Tourism and Cultural Affairs Office

The tourism industry is one major economic driver that contributes to the robust economy of the city with a growth rate of 11% from 2009 to 2010 and an average annual growth rate of 4.07%.

Table 4.37
Domestic and Foreign Arrivals
Cagayan de Oro City

CAGAYAN DE ORO	DOMESTIC AND FOREIGN ARRIVALS/YEAR					
ARRIVALS	2006	2007	2008	2009	2010	2006-2010
Domestic	242,552	313,144	301,079	330,334	352,977	1,540,086
Foreign	17,130	49,767	21,598	24,686	41,911	155,092
Balikbayan			1,736	2,703	5,412	9,851
Others/Unspecified Residence			1,515	4,116	2,730	8,361
TOTAL	259,682	362,911	325,928	361,839	403,030	1,713,390

Particulars	2007	2008	2009	2010
Tourist Arrivals	362,911	325,928	361,839	403,030
Absolute Increase/(Dec)		-36,983	35,911	41,191
%Growth Rate		-10.19%	11.02%	11%
Average Annual Growth Rate				4.07%

Source: City Tourism and Cultural Affairs Office

Every year, the City of Cagayan de Oro celebrates various activities to draw-in crowd pleasers. Popular festivities include the Kagay-an and Lambagohan Festival or the City Fiesta held on the last week of August, highlighted with the Miss Cagayan Beauty Pageant, with the newly crowned hoisted in fluvial parades around the city.

Kagay-anons also show their religious devotion during Holy Week by trekking the steep and narrow path of the Malasag road, and crossing the tricky river of Guadalupe. Everyone will be charmed by various dance, carol and “Belen” competitions for each barangay as the Halad for Pasko closes in. On Christmas, several feasts for the eyes, palates and nostrils are scattered in the city to promote the holidays.

Table 4.38
Cultural and Tourism Activities/Festivals
Cagayan de Oro City

Activity	Frequency of Activity	Duration of Activity
Kagay-an Festival	Yearly	1 Day
Lambagohan Festival	Yearly	1 Day
Halad sa Pasko	Yearly	2 Days
Holy Week / Malasag Trek	Yearly	2 Days
Holy Week/Guadalupe River Cross	Yearly	2 Days
Miss Cagayan Beauty Pageant	Yearly	1 Day

Source: City Tourism and Cultural Affairs Office

The budding tourism industry sees the natural bounty as the next big thing in drawing tourists. Our hinterland barangays offer such attractions like caves in barangays Dansolihon and Bayanga, waterfalls in Tagpangi and Tablon, and springs in barangays Lumbia and Bulua. However, the data source could not ascertain the land area magnitude of these natural sites, thus the vacant column.

Table 4.39
Potential Tourist Attractions in Cagayan de Oro City

BARANGAY	POTENTIAL ATTRACTION	WITHIN FOREST LAND AREAS	WITHIN A & D AREA
Dansolihon	Caves / Langag	<input type="checkbox"/>	
Tagpangi	Falls	<input type="checkbox"/>	
Tablon	Falls / Palalan	<input type="checkbox"/>	
Lumbia	Spring	<input type="checkbox"/>	
Bulua	Spring	<input type="checkbox"/>	
Bayanga	Caves / Cueva De Oro	<input type="checkbox"/>	

Source: City Tourism and Cultural Affairs Office

DISASTER RISK ASSESSMENT

The white water rafting tourism adventure outfitters were also adversely affected by TS Sendong. Four of the six outfitters sustained heavy damages amounting to a total of PhP 320 thousand. Losses were also incurred from cancelled rafting trips and shortfall of bookings for two weeks after the typhoon.

The typhoon has also downgraded the rapids of the Cagayan de Oro River from class II to class III owing to the disconfigured route which totally changed the geographical features of the river.

A tourism facility (Reyna del Rio Floating Restaurant) was also washed out by the typhoon and a resort in Bulua located in a low-lying area was also flooded.

DEVELOPMENT NEEDS

1. Conservation and protection of natural sites and heritage i.e. gorges landscape, critical habitat, wetlands and river system (Macahambus, Mambuaya, FS Catanico, Malasag, Dansolihon, Bayanga, Cugman, Agusan, Indahag, Balubal)
2. Incorporate provisions of pedestrian network (Walkways, bicycle lane) on proposed road right-of-way (DV Soria, Poblacion)-for study

3. Identify and legally declare built heritage sites in Divisoria, Taguanao and Poblacion and regulate building heights, architecture and color for historical-culture tourism
4. Enforce the setback requirements along public roads for yield points/loading-unloading

REGULATION POLICY & GUIDELINES

1. Conservation and protection of natural sites and heritage

<p>Bayanga - Macahambus Cave & Gorge- Natural sites and heritage</p> <p>Malasag - Protection of natural sites for forest reserves</p> <p>Indahag / Taguanao -Natural sites and heritage</p>	<p>Clarification of the status of land ownership (DENR declaration as Forestal Area)</p> <p>Regulate/ limit settlement in the area to preserved its natural site</p> <p>Non issuance of land title/tax declaration</p>
<p>Mambuaya- River system for tourism particularly river rafting</p> <p>Cugman - River system</p> <p>Agusan - River system</p> <p>Cagayan River – protected area</p> <p>FS Catanico- Natural sites for tourism</p> <p>Dansolihon</p>	<p>Prohibit settlements w/in the legal easement along the riverbanks by strict implementation of existing national & local laws rules & regulation.</p> <p>No build zone and restriction of development</p> <p>Development and improvement of the identified natural sites for tourism</p>

Table 4.40
Technical Findings

OBSERVATIONS	EXPLANATIONS	IMPLICATIONS	POLICY OPTIONS
Undeveloped tourism sites	1 Lack of infra support facilities	1 Insufficient revenues from tourism	1 Develop tourism sites
	2 No budget for tourism development	2 Low income for tourism industry	2 Develop tourism programs
	3 Inaccessible tourism sites in selected areas	3 Loss of opportunities	3 Intensify promotion for tourism (IEC)
	4 Less recreational areas and activities	4 Deprived of environmental benefit	4 Develop road network
			5 Encourage PPP
			6 Implement ICM to promote attractiveness of tourist sites

PRIORITY PROGRAMS AND PROJECTS

1. Preservation and Enhancement of Heritage Area (Huluga Cave) at EAST-UPTOWN DEVELOPMENT AREA
2. Establishment of Green Belt Areas (for subdivisions with slope 18deg and up)
3. Establishment of tree parks in subdivisions
4. Tree planting strips along highways (5% of project area as open space)
5. Agro-Tourism Development at Palalan, Tablon (piped irrigation system for farm lots watering) 150 hectares
6. Development and Promotion of a unique Signature “Pasalubong Product” for Cagayan de Oro.
7. Identification and establishment of a Pasalubong Center.
8. Establishment of downtown check-in Lounge and Shuttle to ferry airport passengers from CdeO to Laguindingan Airport and vice versa.
9. Alternative Fast craft ferry system to Laguindingan Airport
10. Establishment of local Chinatown in Cogon CBD.
11. Construction of 30-storey City Center to house as Condotel, Government Offices (Library, Museum and Tourism Information).
12. Installation of Cable Car System within the city.

13. Redevelopment of City Amphitheater as modern public Amusement and Recreational Center with basement parking area.
14. Regular Maintenance and Enhancement of existing Historical Landmarks in the city.

Integrated Economic Sector Policy Options

Technical Findings/Issues/Concerns	Implications if not solved	Policy Options			
		Adaptation Measures		Mitigation Measures	
		Structural	Non-Structural	Structural	Non-Structural
Flooding at low-lying areas (specifically along riversides, creeksides, valleys, etc.)	<p>**Agriculture, Fishery and Forestry**</p> <p>2,417 farmers will be affected</p> <p>Reduced agricultural production/productivity</p> <p>Livestock/animal lives are endangered</p> <p>Fishponds will overflow and fingerlings/fry will be washed out</p>		<p>Tree planting/Reforestation/ Forest Rehabilitation</p> <p>Improve waste disposal system</p> <p>Collaboration and mobilization of stakeholders on the possible transfer or temporary shelter for safety/safekeeping of livestock, fry and</p>	<p>Construction of river protection walls, dikes, ripraps</p> <p>Construction of bridge linking from Besigan to Talakag</p> <p>Promotion of contour farming/SALT</p>	<p>Bamboo planting along riversides and creeksides</p> <p>Maintenance of natural waterways (rivers, creeks, drainage canals) through dredging</p> <p>Delineation of SAFDZ/ Establishing priority area development for agriculture</p> <p>Strict implementation of mining laws and regulations</p>

CLUP Volume 3 – The Sectoral Studies

			fingerlings in case of eminent flooding		Implementation/ integration of CDORBMC Programs and Projects
			Insure agricultural produce with PCIC (crops, livestock and fishery)		
	<p>**Commerce/Trade and Industry**</p> <p>Hamper business operations and industries that would result to reduced revenues/income</p> <p>Damage to goods and inventories</p> <p>**Tourism**</p> <p>White Water Rafting Adventure course downgraded, consequently leading to lost opportunities and revenues</p>	Installation of rainwater harvesting facility and water impounding system			
			Tree planting/Reforestation/ Forest Rehabilitation	Provision, rehabilitation and establishment of quality infra-support (river dikes, protection wall, drainage canals)	

CLUP Volume 3 – The Sectoral Studies

Treasure hunting on protected areas	Destruction of cultural, natural sites and heritage				<p>Conservation and protection of cultural, natural sites and heritage</p> <p>Maintenance of identified natural sites for eco-tourism</p>
Drought	Damage to crops and animal lives that would result to reduced farm productivity and income	<p>Installation of an irrigation facility (SWIS)</p> <p>Install water sprinkling facility</p> <p>Installation of rainwater harvesting facility and water impounding system</p>	<p>Planting of annual crops near sources of water (riversides)</p> <p>Crop diversification and promotion of drought -resistant varieties</p>		<p>-</p> <p>-</p> <p>-</p>

CLUP Volume 3 – The Sectoral Studies

	<p>Infestation of puffer fishes and jelly fishes in the fishery sector that would cost damage to fishing paraphernalia resulting to no fish catch</p> <p>Prone to forest and grass fire</p>		Provide alternative livelihood for the fisherfolks		<p>Implement 'No Smoking Policy' within natural forest and parks</p> <p>Activation/organization of 'Bantay Kalikasan'/Fire Protection Task Force</p>
	Increased demand for power and water to commerce/trade, industry and tourism facilities resulting to increased power and water consumption costs	Tap alternative sources of energy (Solar)			<p>Tree planting / reforestation / forest rehabilitation / rainforest development</p> <p>Coordination with other LGUs in the management of the watershed</p>

CLUP Volume 3 – The Sectoral Studies

Assessing Single Actions for DRR – Economic Sector

Assessing Single Action For DRR: FLOODING																								
Actions	Implication to DRR Efforts						Implications to Development						Implementation Issues						TOTAL SCORE					
	Potential to reduce Exposure / Risk to Life		Potential to reduce exposure / Risk to Property		Urgen cy of DRR Action		Negative Conse quence of No Action		Impact to Preferred Develop ment		Land Use changes needed		Ease of Implement ation		Resour ces needed		Policy Adjust ments needed			Manage ment of Actions needed		Efficiency of Action		
	High	5	High	5	High	5	High	5	High	5	High	5	High	5	High	5	High	5		High	5	High	5	
		4		4		4		4		4		4		4		4		4			4		4	
		3		3		3		3		3		3		3		3		3			3		3	
	2		2		2		2		2		2		2		2		2		2		2		2	
	Low	1	Low	1	Low	1	Low	1	Low	1	Low	1	Low	1	Low	1	Low	1	Low	1	Low	1		1
FLOODING	1-1		1-2		1-3		2-1		2-2		2-3		3-1		3-2		3-3		3-4		3-5			

CLUP Volume 3 – The Sectoral Studies

Development of Rural road network linking to primary farming areas for the 270 km. length of FMR (allocation of funds)	(3)- 2,417 farmers affected; 24 or 30% of total barangays affected	(3) - 24 or 30% of total barangays affected	(3) - Medium	(4) - Difficulty in mobility of people/transport of goods, agricultural produce, agricultural development not optimized, reduce revenues and farm income	(4) - higher farm productivity and income; Supportive to Goal 4 and its development objectives	(4) - very minimal effects, affects agricultural land use	(2) - will definitely require financial assistance; technical expertise may be available	(3) - CEO	(4) -	(4) - Several stages required in implementation, capability to manage available	(4) - Farming communities	38
Establishment of food terminals	(1) - not significant enough as to DRR	(1) - not significant enough as to DRR	(1) - not significant enough as to DRR	(3) - difficulty in accommodating bulk agricultural produce that cannot be catered by existing terminals/markets; slight disruption and effect to development gains that may consequent	(4) - intervention supports development objectives and compatible with development thrust	(4) - no, not at all	(5) - yes, with a supporting enabling environment	(3) - CEED	(4) - supporting existing policies	(4) - City Government/ CEED	(3) - Cheaper prices of agricultural commodities/goods	25

CLUP Volume 3 – The Sectoral Studies

				ly lessen potential revenues								
Identification and establishment of docking area/fish port	(1) - no implication to DRR effort	(1) - no implication to DRR effort	(1) - no implication to DRR effort	(2) - slightly significant; fishing boats will be docking anywhere to unload their fish catch	(2) - support development objectives of the fishery sub-sector; but not to the overall development thrust	(5) - not at all affect land use arrangement	(2) - presence of a supportive enabling environment	(2) - financial assistance to realize intervention needed	(3) - require new legislation for proposed action	(4) -	(2) -	28

CLUP Volume 3 – The Sectoral Studies

Provision of drainage and sewerage system	(4) - Settlers of barangays abutting along major waterways (rivers, creeks, drainage canals) and lowland areas	(4) - Reduces damage to properties along riversides, creeksides and low-lying areas	(4) - Medium High	(4) - Drainage canals overflow, flooded areas, spread of water-borne and skin diseases, hampered business/ industrial activities, disruption to development gains and reduced revenues, lives and properties put to risks	(5) - Highly supportive to Goal 4 and its development objectives and development thrusts	(2) - Affects urban land use	(3) -	(4) - CEO/City Government	(3) -	(5) -	(5) -	43
---	--	---	-------------------	---	--	------------------------------	-------	---------------------------	-------	-------	-------	----

CLUP Volume 3 – The Sectoral Studies

Adoption of River Basin Watershed Approach in Planning	(5) - Whole of Cagayan de Oro City and its residents	(5) - Whole of Cagayan de Oro City; especially the 30% of barangays affected	(5) - High	(5) - Frequency and severity of flooding, high disruption and reduction to development gains, more lives and properties at risk, less revenues	(5) - Supportive to Goal 3 and its development objectives	(4) - Will not affect land use	(5) -	(5) - CLENRO, CPDO and Private Sectors	(4) - Action needed other LGU's cooperation	(5) -	(5) -	53
Formulation of Drainage Master Plan	(4) - Cagayan de Oro City settlers at lowland areas especially those abutting major water ways	(4) - Reduces damage to properties along riversides, creeksides and low-lying areas	(4) - Medium High	(4) - Flooding and other drainage problems will not be resolved; Expected development gains will not be attained	(5) - Supportive to Goal 4 and development objectives on good infra-support	(4) -	(4) -	(5) - City Engineer's Office (CEO)	(4) -	(5) -	(5) -	48

CLUP Volume 3 – The Sectoral Studies

Strict implementation of RA 9003	(5) - Whole of Cagayan de Oro City and its residents	(5) - Eliminates the damaging effects of indiscriminate waste disposal	(5) - High	(5) - Garbage accumulates or accrues over time; Environmental degradation and lives are threatened (human, animals/aquatic, and plants)	(5) – Supportive to Goal 3 and development objectives	(5) -	(5) -	(5) - CPSO and CLENRO	(1) -	(5) - CPSO and CLENRO	(5) -	51
Strict implementation of the Water Code, particularly on easement as provided by law	(5) – Barangays with settlements abutting along the riversides and creek sides	(5) - Reduction of damage to properties (farm lots, livestock animals, business/industrial establishments, tourism facilities)	(5) - High	(5) - River easements occupied, more units built accrues over time; more lives and properties will be at risk; negative impact	(5) – Supportive to Goal 3 and development objectives	(5) - Affects areas along water bodies (River sides, creek sides, coastal)	(5) -	(4) - CLENRO and City Building Office	(1) -	(5) -	(5) -	50

CLUP Volume 3 – The Sectoral Studies

Strict implementation of RA 8435	(5) - Farming barangays abutting along riversides/ major water ways, lowlands (valleys); affected 2,417 farmers	(5) - Whole of Cagayan de Oro, reduction of damage to properties brought about by improper garbage disposal, 44 barangays affected	(5) - High	(5) - Agricultural development and food security is threatened;	(5) - Supportive to Goals 3 and 4 and its development objectives	(5) - Affects agricultural	(5) -	(5) - City Agricultural Productivity Office (APO) and City Veterinary Office	(1) -	(5) -	(5) - City Agriculture	51
Rehabilitation of denuded areas	(5) - Whole of Cagayan de Oro City and its residents	(5) - Reduces if not completely eliminate damages caused by deforestation	(5) - High	(5) - Destruction to watersheds, more prone to flooding, lives and properties will be more at risk	(5) - Supportive to Goals 3 and its development objectives	(5) - Forestlands, grass lands, unused agricultural lands	(5) -	(5) - CLENRO and City Agricultural and Productivity Office (APO)	(1) -	(5) - CLENRO	(5) -	51

CLUP Volume 3 – The Sectoral Studies

Tree planting/Reforestation/Forest Rehabilitation	(5) - Whole of Cagayan de Oro City and its residents	(5) - Whole of Cagayan de Oro	(5) - High	(5) - More frequent and severe flooding	(5) - Supportive to Goal 3, its development objectives and development thrusts	(4) - Affects urban area development	(5) - CLENRO/City Government	(5) - Sufficient resources with CLENRO and City Agriculture	(2) -	(5) - CLENRO	(5) - Yes, benefits weigh more than the cost of implementing the action and to the great majority	51
Improve waste disposal system	(5) - Whole of Cagayan de Oro City	(5) - Cagayan de Oro City	(5) - High	(5) - Dirty surroundings, clogged drainage, overflowing drainage canals, severe flooding	(5) - Supportive to Goal 3, its development objectives and development thrusts	(1) -	(5) - CPSO	(3) -	(2) -	(2) -	(5) -	43
Collaboration and mobilization of stakeholders on the possible transfer or temporary shelter for safety/safekeeping of livestock, fry and fingerlings in case of eminent flooding	(1) -	(5) - Affected livestock population and fishery	(2) - Medium low	(4) - High mortality of livestock and animals	(4) - Supportive to Goal 4, its development objectives and thrust	(1) - Minimal effects	(4) - Livestock farmers and Fisherfolks Associations	(3) - CVO, APO	(1) -	(4) -	(5) -	34

CLUP Volume 3 – The Sectoral Studies

Insure agricultural produce with PCIC (crops, livestock and fishery)	(1) -	(5) - Affected crop lands, livestock heads, and fish ponds	(4) - Medium High	(5) - Low production and productivity of crop lands, livestock and fishery; reduced income	(5) – Support ive to Goal 4 and its developm ent objectives	(1) -	(4) - APO and City Veterinary Office, Farmers, Livestock Farmers and Fisherfolks Associa tions	(3) -	(1) -	(4) -	(5) -	38
Construction of bridge linking from Besigan to Talakag	() -	() -	() -	() -	() -	() -	() -	() -	() -	() -	() -	
Promotion of contour farming/SALT	(1) -	(4) -	(3) - Medium	(4) - Soil erosion, siltation in water bodies	(5) - Supportiv e to Goal 4 and its develop ment objectives	(2) - Affects agricultu ral	(4) - City Agriculture, Farmers' Field School	(4) - City Agricul ture	(2) -	(4) -	(5) -	38
Bamboo planting along riversides and creeksides	(4) -	(4) -	(4) - Medium High	(5) - Erosion of riversides and creeksides	(5) - Supportiv e to all developm ent Goals (1-4) and objectives and develop ment thrusts	(4) - Affects water ease ments	(5) -	(5) -	(2) -	(4) -	(5) -	47

CLUP Volume 3 – The Sectoral Studies

Maintenance of natural waterways (rivers, creeks, drainage canals) through dredging	() -	() -	() -	() -	() -	() -	() -	() -	() -	() -	() -	
Delineation of SAFDZ/ Establishing priority area development for agriculture	(1) -	(2) -	(1) -	(2) -	(4) – Supportive to Goal 3 and 4, its development objectives	(2) -	(3) -	(4) -	(4) -	(3) -	(4) -	30
Strict implementation of mining laws and regulations	(4) -	(4) - Affected barangays along the Cagayan and Iponan Rivers	(4) - Medium High	(5) - Water bodies contamination, siltation, environmental degradation	(5) - Supportive to Goal 3 and its development objectives	(1) -	(4) - CLENRO	(2) -	(2) -	(3) -	(5) -	39
Implementation/integration of CDORBMC Programs and Projects	(5) -	(5) -	(4) - Medium High	(5) -	(5) – Supportive to Goal 3 and its development objectives	(2) -	(3) -	(2) -	(4) -	(3) -	(5) -	43

CLUP Volume 3 – The Sectoral Studies

Installation of rainwater harvesting facility and water impounding system	(5) -	(5) -	(5) - High	(5) - Contributes severity to flooding	(4) – Support ive to Goal 1, and its developm ent objectives	(1) -	(4) -	(3) -	(4) -	(2) -	(5) -	43
Provision, rehabilitation and establishment of quality infra-support (river dikes, protection wall, upgraded drainage canal)	() -	() -	() -	() -	() -	() -	() -	() -	() -	() -	() -	
Conservation and protection of cultural, natural sites and heritage	(2) -	(4) -	(4) - Medium High	(5) - Damaged tourism sites, environmen tal degrada tion, reduce revenues	(5) – Support ive to Goal 3 and its develop ment objectives	(2) -	(4) -	(4) - CTCOA/ City Govern ment	(2) -	(4) -	(5) -	41
Maintenance of identified natural sites for eco-tourism	(2) -	(2) -	(3) - Medium	(3) - Loss of aesthetic view and beauty, gradual degrada tion/ deteriora tion	(4) - Supportiv e to Goal 3 and its developm ent objectives	(2) -	(5) -	(4) - CTCOA/ City Govern ment	(2) -	(4) -	(5) -	36

Integrated Economic Sector Priority Programs and Projects

- Integration of fodder trees and forage crops as hedgerows to conserve soil and water and enhance farming system (SALT)
- Promotion of Rain Water Harvesting System (small farm reservoir); water impounding
- Establishment of evacuation sites for livestock with available forage/feedstuff (forage gardens)
- Increase livestock production through good animal husbandry practices
- Advocate production/utilization of Drought and Flood-resistant Crop Varieties
- Enactment of a City Ordinance for the implementation of Organic Farming Act in CDO
- Rehabilitation of Existing Irrigation Facilities
- Promotion of Diversified Farming Systems with Agro-forestry
- Implementation of integrated coastal management plan (11 coastal barangays)
- Promotion of farming technologies in agricultural areas
- Imposition of idle tax to unused land and environmental tax as watershed management fee
- Establishment of Livestock Auction Market
- Provision of climate-smart infra-support facilities (FMRs, dikes, drainage and sewerage systems)
- Installation of elevated pedestrians at commercial business districts for emergency exit routes (e.g. Skywalk / skybridge)
- Conduct of a Study for Construction of Water Discharge Channel in the CBD
- Implementation of “no establishment policy” for business establishments within identified high risk areas
- Tax incentives for business affected by CC related events
- Establishment of commercial business districts (CBDs) in new growth areas
- Fiscal incentives to business establishments identified in hazard-prone areas upon relocation to proper zones
- Adoption of Green Building Technology for business, tourism and industrial establishments
- Integration of corporate social responsibility in advocating zero plastic utilization
- Preservation/maintenance of eco-tourism sites (i.e. Macahambus Cave, Lawndale Spring) damaged from CC impacts -Adoption of building back better (RA 10121)
- Promotion of tourist sites, packages and create other tourism attractions and adventure
- Completion of Convention Center at Barangay Indahag

- Diversification of economic activities (livelihood, entrepreneurial and skills trainings)
- Implementation of Proposed Forest Development in 5 Barangays (3,000 has.)

Chapter 5

Infrastructure and Utilities Sector

5.1 Transportation

Situational Analysis

Cagayan de Oro is the transport hub of Northern Mindanao with a total road length of 635.8076 kilometers. It connects to the five other regions in Mindanao with a good network of highways. It is the strategic gateway to the rest of Mindanao and the country.

Travel by land takes 40 hours from Manila via Surigao City, and 9 hours from Davao City via Butuan City, and 6 hours via Bukidnon. From the western most City of Zamboanga, travel time takes 12 hours and about an hour and a half from Iligan City.

The Port of Cagayan de Oro and other five private ports serve as entry points by sea from other areas of the country.

Land Transportation

Roads

Primary road passes through Cagayan de Oro link Butuan City to the East and Iligan City to the West. A primary road connects to Malaybalay, Bukidnon from Barangay Puerto. A secondary road from the south links Cagayan de Oro to Talakag, Bukidnon.

Cagayan de Oro City has a total road length of 635.8076 kilometers as shown in the table below.

Table 5.1
Inventory of Roads by System Classification and Type of Pavement, 2012

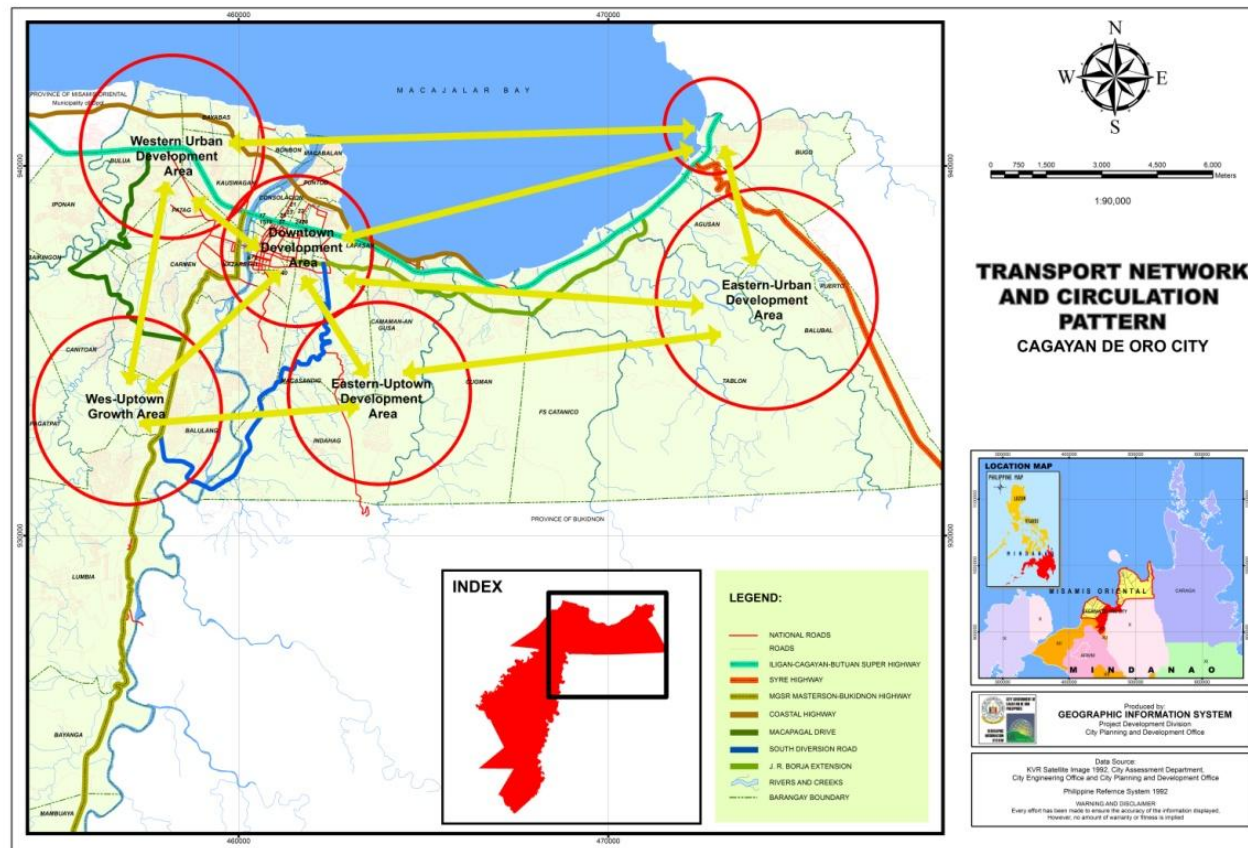
Roads by System Classific ation	Road Surface Type												Total Length (km)
	Concrete			Asphalt			Gravel			Earth			
	km	%	C	km	%	C	km	%	C	km	%	C	
National	56.9380		Good	25.4900		Good	0	0		0.1480			82.5761
City	214.3555		Good	10.5950			310.4560			17.8250			553.2315
TOTAL	271.2935		Good	36.0850			310.4560			17.9730			635.8076

Source: *DEPW, CEO*

*C – Physical Condition: Good – Acceptable/Serviceable
Poor – Needs Improvement
Critical – For Priority Action*

The accessibility to the city center is still through the Recto Highway that contributes to the traffic volume as more business attractions like Ayala Centrio Mall and Limketkai Mall expansion are now open for business.

Figure 5.1
Transport Network Map
Cagayan de Oro City



With the devastation caused by Tropical Storm Sendong which struck the city in December 16-17, 2011, the transportation scenario has changed. Places along the Cagayan River that have long been identified by the DENR as flood-prone areas and therefore not suitable for habitation have suddenly been cleared. Barangay Macasandig was the hardly-hit followed by Carmen where roads were damaged.

Acacia St. in Carmen, Burgos St. in City Center Paseo del Rio area in Macasandig were submerged during the flood last December 16, 2011. Improving the dike system along Cagayan River can assuage the flooding of these streets.

Figure 5.2 below shows the flooded area of the city proper during TS Sendong. About 35% of the total local road network of the City was flooded. Flood damaged 218.4425 km road length, 0.64 km long dike along the Cagayan River and 10 bridges in 40 barangays. Rainfall induced landslide affected 3,580 meter roads in 11 barangays. Storm Surge affected 11 barangays along the Macajalar Bay. Total damage to city road, bridges, spillways and dike is estimated at P98,702.90.

Figure 5.2
Flood Affected Areas during TS Sendong
Cagayan de Oro City

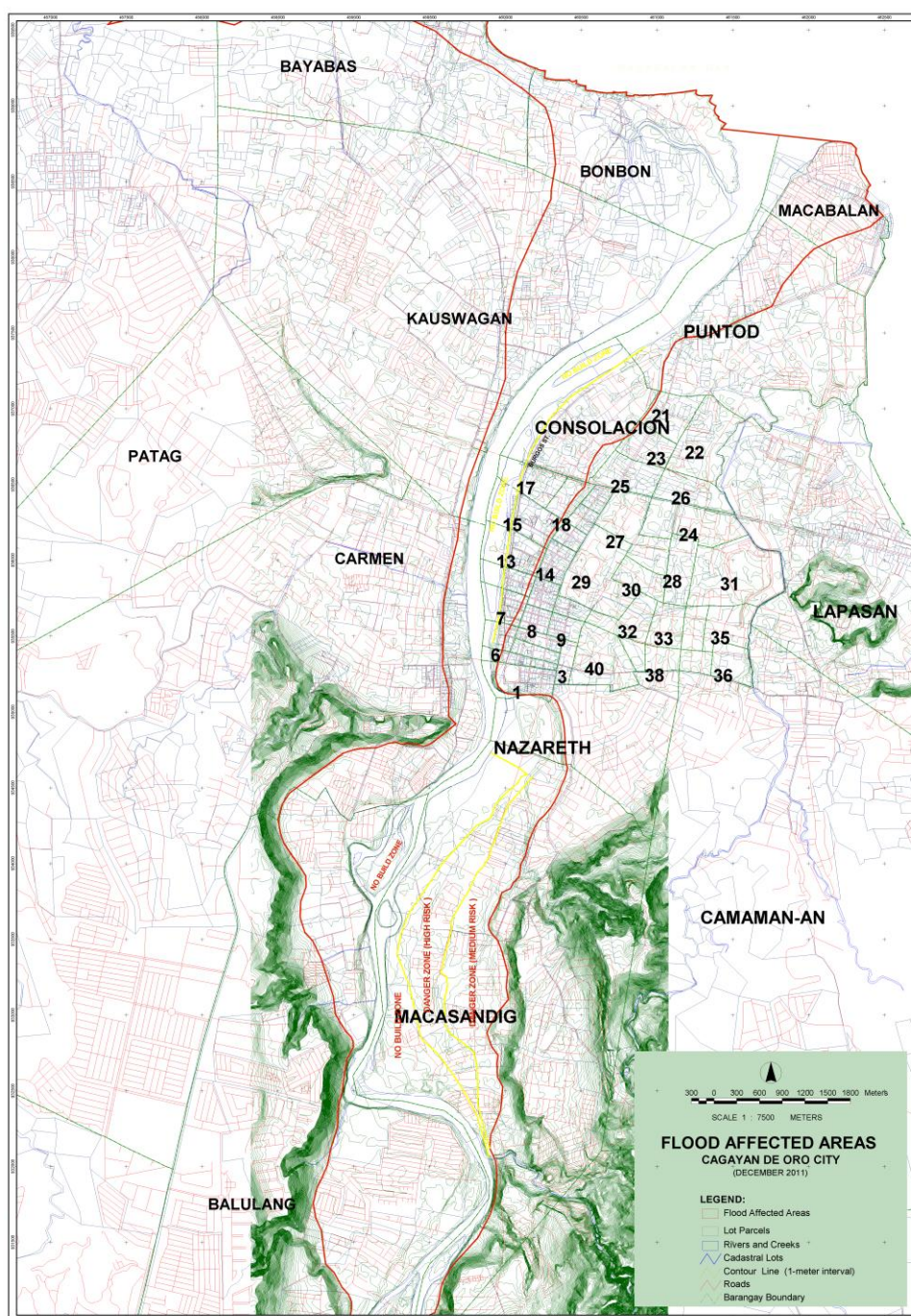


Table 5.2
Flooded Road during TS Sendong
Cagayan de Oro City

Barangay	Flooded Road (km)
Baikiong	2.6579
Balulang	26.4564
Barangay 1	1.6306
Barangay 10	0.5252
Barangay 11	1.2696
Barangay 13	0.4322
Barangay 14	0.8569
Barangay 15	1.1070
Barangay 16	0.5853
Barangay 17	0.7309
Barangay 18	0.1208
Barangay 19	0.4229
Barangay 2	0.4516
Barangay 20	0.4432
Barangay 21	0.3415
Barangay 25	0.1266
Barangay 4	0.3339
Barangay 5	0.5635
Barangay 6	0.3781
Barangay 7	0.6070
Barangay 8	1.0883
Bayabas	1.2703
Bonbon	9.3107
Bulua	15.1970
Canitoan	16.2668
Carmen	3.1306
Consolacion	9.3341
Iponan	29.2086
Kauswagan	3.7518
Lumbia	0.3740
Macabalan	20.5196
Macasandig	40.5044
Nazareth	5.9315
Pagatpat	12.6477
Patag	4.0736
Puntod	4.0739
San Simon	1.7095
Total	218.4425

Source: DRA Report

Bridges

There are 17 existing bridges along the national roads of Cagayan de Oro which include four steel bridges and thirteen concrete bridges (Table 5.3). There are other 25 bridges along city roads, 20 of which are located in District 1 while the other 5 are located in District 2 (Table 5.4). Most of these bridges are in good condition.

Table 5.3
Existing Bridges along National Roads by Location, Type and Condition
Cagayan de Oro City, 2012

Bridge Name	Barangay	Bridge Type	Load Limit (tons)	Overall Bridge Condition
Agusan Bridge 1 (Upstream)	Agusan	Concrete	20	Good
Agusan Bridge 2 (Downstream)	Agusan	Steel	20	Good
Alae Bridge 1	Bugo	Concrete	20	Good
Alae Bridge 2	Bugo	Concrete	20	Good
Bigaan Bridge 2 (Downstream)	Gusa	Steel	20	Good
Bigaan Bridge 1 (Upstream)	Gusa	Concrete	20	Good
Binonoan Bridge	Carmen	Concrete	15	Fair
Bulua Bridge	Bulua	Concrete	15	Good
Cagayan Bridge	Carmen	Steel	15	Fair
Cugman Bridge 1	Cugman	Concrete	20	Fair
Cugman Bridge 2	Cugman	Concrete	20	Good
Iponan Bridge 1	Iponan	Concrete	20	Good
Iponan Bridge 2 (DS)	Iponan	Concrete	20	Fair
Managalay Bridge	Dansolihon	Concrete	20	Good
Marcos Bridge	Consolacion	Concrete	20	Good
Umalag Bridge 1	Tablon	Concrete	20	Good
Umalag Bridge 2	Tablon	Steel	20	Fair

Source: CEO, DEPW

Table 5.4
Inventory of Bridges along City Roads by Location, Type and Condition
Cagayan de Oro City, 2012

Bridge Name	Location (Barangay)	Type	Load Limit (in tons)	Physical Condition
District 1				
Monigue Bridge Upstream	Dansolihon	Steel	20	Good
Monigue Bridge Downstream	Dansolihon	Steel	20	Good
Magawa Bridge	Dansolihon	Steel	20	Good
Pasto I to II Bridge	Tagpangi	Steel	20	Good
Bayanga-Midkiwan Bridge	Bayanga	Steel	20	Good
Kibanog Bridge	Tignapoloan	Steel	20	Critical (eroded portion in the abutment)
Ipakibil Bridge	Tignapoloan	Steel	20	Good
Dumalokdok Bridge	Tumpagon	Steel	20	Good
Pigsag-an Bridge	Pigsag-an	Steel	20	Good
Guinitan Dako Bridge	Pigsag-an	Steel	20	Good
Pagalungan Bridge	Pagalungan	Steel	20	Good
San Simon Bridge	San Simon	Concrete	20	Critical (due to quarrying activities)
Pelaez Bridge	Taguanao	Concrete	20	Good
Kagay-an Bridge	Carmen	Concrete	20	Good
Pamalihi Bridge	Pagatpat	Steel	20	Good
Pahiron Bridge	Lumbia	Steel	20	Good
West Diversion Bridge	Canitoan	Steel	20	Good
Kulago Bridge	Canitoan	Steel	20	Good
Calaanan Relocation Bridge	Canitoan	Steel	20	Good
Bolao Bridge	Iponan	Steel	20	Good
District 2				
J.R. Borja Bridge 1	Camaman-an	RCDG	20	Good
J.R. Borja Bridge 2	Gusa	RCDG	20	Good
Hayes Bridge	Camaman-an	RCDG	20	Good
Yacapin Bridge	Camaman-an	Flat Slab	20	Good
Tabacco Bridge	Lapasan	Steel	1	Good

Source: CEO, DEPW

Flyovers and Overpass

There are three flyovers in the city, namely: located at Recto Avenue-Licoan, at Masterson Avenue-Macanhan Road, and at Puerto-Sayre Highway.

The opening of Kagay-an Bridge (5th Bridge) greatly reduced the traffic at Ysalina Bridge. The installation of overpass at Macanhan reduced the traffic congestion going to Uptown Cagayan de Oro. The installation of overpass at Recto-Velez St. reduced the traffic congestion in that intersection but do not reduce the traffic congestion at Recto-Corrales intersection.

Ancillary Road Facilities

Table 5.5
Inventory of Ancillary Road Facilities, 2012
Cagayan de Oro City

Type of Ancillary Road Facility	Location of Ancillary Road Facility					
	National Road			City Road		
	Road Name	No.	Condition	Road Name	No.	Condition
Pedestrian Crossing	Velez, Recto, Vamenta, BCI Highway	22	Good	Capistrano, Corrales, JR Borja, Yacapin	20	Good
Sidewalk		10			15	
Overpass		9			0	
Waiting sheds		14			7	
Street lights		80			90	
Traffic lights		9			5	
Road signages		90			90	
Drainage		20			20	
Flyover		3				

Source: CEO, DEPW

Public Land Transportation Vehicles

Table 5.6
Inventory of Public Land Transportation Vehicles by Type, 2012
Cagayan de Oro City

Vehicle Type	Number
Cars	5,602
Utility Vehicles	16,431
Buses	115
Trucks	4,287
Trailers	293
Motorcycles/Tricycles, SUV	30,781
Total	57,509

Source: Land Transportation Office

Land Transportation Terminals

Table 5.7
Land Transportation Terminals by Location and Condition, 2012
Cagayan de Oro City

Name	Location	Type of Public Utility Using the Terminal	Terminal Facilities/ Establishments	Physical Condition
Market City	Agora, Lapasan	Bus, Jeepney, Taxi, Van, Multicab	Food chain/ eatery/carenderia, pharmacy, department store, bakeshop, pay public toilets	Good
West Bound Public Terminal and Market	Bulua	Bus, Jeepney, Taxi, Van, Multicab	Food chain/ eatery/carenderia, pharmacy, bakeshop, pay public toilets	Good

Source: Primary Survey

Road Accidents for the Past Three Years

Table 5.8
Road Accidents by Nature, Damage Cost and Frequency, 2010-2012
Cagayan de Oro City

Year	Total No. of Reported Accident	No. of Person Injured	No. of Person Killed	No. of Case Settled	Estimated Amount Damaged (PhP)
2010	5,425	1,604	25	129	26,989,000.00
2011	4,163	1,715	31	60	P20,518,000.00
2012	4,652	2,087	32	87	P20,518,000.00

Source: Roads and Traffic Administration

Sea Transportation

Cagayan de Oro seaports have the shortest distance to the major ports in the Visayas and Luzon, thus making such ports the favorite exit of people and cargo coming from various points in Mindanao.

The City has one government port and five private ports, namely:

1. Baseport (government) in Macabalan
2. Cagayan de Oro Oil Mill in Tablon
3. Cag. Corn Products Corp. Tablon
4. Del Monte Phils., Inc. in Bugo
5. General Milling Corporation, Tablon
6. Carlos A. Gothong Lines, Inc. in Baloy, Tablon

With its strategic location and with the numerous seaports along its extensive coast, the City has sustained its role as the principal distribution center for the adjacent provinces of Misamis Oriental, Lanao del Norte, Bukidnon, Agusan and Surigao City.

The baseport, known to be the Port of Cagayan de Oro, is a contributing factor that made the City the ideal major trading center in Mindanao. It is the focal point of domestic and foreign trade in the Province of Misamis Oriental, as well as the export outlet of the vast agricultural Province of Bukidnon.

It is situated in Barangay Macabalan facing the Macajalar Bay. It serves as a major transfer junction for domestic and foreign shipping. It occupies an area of 22.01 hectares, 19.75 hectares of which is used for its operations, and 2.26 hectares are for commercial purposes.

Modern support services and infrastructure facilities of the Port of Cagayan de Oro sufficiently answer the increasing demand of domestic and foreign traffic. The cargo handling operations are undertaken by "Task Force Oro Port".

Table 5.9
Shipcalls at Port of Cagayan de Oro

PPA Port of Cagayan de Oro				
Annual Data on Ship calls				
	2008	2009	2010	2011
SHIPCALLS	2,299	2,395	2,624	2,558
Domestic	2,145	2,248	2,515	2,468
Foreign	154	147	109	90
CARGOES (MT)	3,543,140	3,398,732	3,661,721	388,807
Domestic	2,826,657	2,663,626	3,079,142	3,383,467
Foreign	716,483	735,166	582,579	505,340
PASSENGERS	1,034,937	1,016,453	1,057,381	1,012,099
Disembarking	533,077	512,542	528,933	520,975
Embarking	501,860	503,911	528,448	491,124
Private Port under PMO Cagayan de Oro				
Annual Data on Ship calls				
SHIPCALLS	1,526	1,591	2,063	1,792

Domestic	1,278	1,371	1,855	1,623
Foreign	248	220	208	169
CARGOES	2,508,440	2,263,812	2,540,076	2,269,507
Domestic	1,366,529	1,487,118	1,921,774	1,868,383
Foreign	1,141,911	776,694	618,302	428,124

Source: Philippine Port Authority

Air Transportation

Laguindingan Airport, which has just started its operation, is approximately 40 kilometers from the city.

Table 5.10
Schedule of Flights, 2013
Laguindingan Airport

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
PAL (Mla-CdeO-Mla)	5	5	5	5	5	5	5
CEBU PACIFIC (Mla-CdeO-Mla)	5	5	5	5	5	5	5
CEBU PACIFIC (Cebu-CdeO-Cebu)	3	3	3	3	3	3	3
PAL EXPRESS (Cebu-CdeO-Cebu)	1	1	1	1	1	1	1
ZEST AIRWAYS (Cebu-CdeO-Cebu)	1	1	1	1	1	1	1

Source: CAAP (Temporary Schedule)

Table 5.11
CCA-DRR Connectivity
ELEMENT: Built Environment
DESCRIPTOR: Highly Competitive/Sustainable Environment
SUB-SECTOR: Transportation

INDICATORS	CCA+DRR CONNECTIVITY	
	What is the impact/effect of the indicator in attaining climate resiliency /reduction of disaster risks?	What is the impact/effect of changing climate and the occurrence of disaster to the local development?
A. Roads Existing Road Networks Paved = 300kms Unpaved= 324kms All unpaved to paved within 6years Open road networks for 30 km/year (300kms in 10years)	Increased Traffic Efficient delivery of goods and services	Increased temperature in the area Reduced flooding within the area Efficient mobility of emergency response
B. Establishment of Flood Control System (structural and Non-Structural) Along Iponan and Cagayan de Oro River	Reduced damage to properties	Increase in people awareness Increased budget for flood mitigations Reduced use of classrooms for evacuations
C. Upgrading of existing drainage system	Unhampered flow of run-off water during heavy downfall and eliminate stagnant water	Reduced flood level

CURRENT AND PROJECTED NEEDS

- i. Adequacy of total road length against population served.
The current population is 602,088 as of NSO survey in 2010. The projected population by 2017 is 752,170 and by 2022 is 899,946.
- ii. Urban road requirements
 7. Current length of urban road 623.28 km
 8. Current urban population 555,605
 9. Standard road/population ratio 2.4 km per 1000 population
 10. Current urban road requirement
 $(555,605 \times 2.4/1000) - 623.28 = 1333.452$
 $1333.452 - 623.28 \text{ km} = 710.172 \text{ km}$

11. Given the standard road requirement, Cagayan de Oro needs 710.17 km for the current population

iii. Rural road requirements

12. Total area of Cagayan de Oro	57,851.00 ha
13. Urban area	19,952.25 ha
14. Rural area	37,898.75ha
15. Existing arable area	20,404.756 ha
16. Existing rural road length	129.729 km
17. Standard road/area ratio	1.50 km/100 has
18. Current rural road requirement	
	$37,898.75 \text{ ha} \times 1.50 \text{ km/100 has} = 568.5 - 129.729 \text{ km}$
	$= 438.711 \text{ km}$
19. Given the standard road requirement, Cagayan de Oro needs 438.711km based on rural area	

iv. Determine future road requirements

20. Urban road requirements	
21. Current length of urban road	623.28 km
22. Current urban road requirement	710.172 km
23. Population 2017	752,170
24. Projected urban road requirement	291.23 km

v. The urban road requirement considering the population of 2017 is 291.23 km. The total urban road requirement is 1001.41 km

vi. Considering Cagayan de Oro complies with HLURB PD 957 road requirement. At 30 % allocation for road and total urban area of 19,952.25 ha, the allocated area for road is 5985.675 ha. At twelve meter road right of way, the road length is 3,741 km.

vii. The total road requirement of Cagayan de Oro at 2017 population is 1,624.69 km

Table 5.12
Sectoral Analysis Matrix, Transportation

Technical findings (Observations)	Implications (Effect)	Recommendation (Intervention)
Road Insufficient road length and road right of way There is a shortage of road estimated at 710.172 km in 2012 and 291.23 km by 2017	Traffic congestion	Widening of existing road right of way Construction of 710.172 km by 2013 Construction of 291.23 km by 2017 Acquisition of additional right of way from existing public road to connect the main thoroughfares
Drainage Lack of drainage system and clogged/silted main drainage channel As roads and drainage goes together, lack of road also means lack of drainage.	Flooding, Traffic congestion, Poor road condition, Pollution	Construction of additional drainage system, Cleaning of illegal structures and obstruction of main drainage right of way Declogging of existing clogged drainage system, Acquisition of additional right of way from existing public road to connect the drainage
Traffic Lack of ancillary road facilities including sidewalks, pedestrian, lighting, signage Establish loading and unloading areas	Frequent road accidents and occurrence of crimes Traffic congestion	Provision of ancillary road facilities on existing roads New projects should have complete ancillary road facilities Provision of CCTV Cameras Provision of turn-outs at strategic areas

Table 5.13
Transport Related Projects, Approved/Funded for Implementation

Name/Location of Project	Location	Type	Proponent (Gov't, Private, Other)	Estimated Start Date	Estimated Date of Completion
Construction of Coastal Road	Opol Mis. Or. To Gusa, CDO	Concrete	Govt.	On-going ROW acquisition and sectional concreting and drainage system	
Widening of Sayre Highway	Puerto Junction to Alae, Manolo, Fortich, Buk.		Govt.	-do-	
Improvement of Road Leading to FS Catanico	Gusa Junction to FS Catanico		Govt.	-do-	
Rehabilitation/Reconstruction/Up grading of SAYRE HIGHWAY	Puerto Junction to Alae, Manolo Fortich	Asphalt	Govt.	-do-	
Rehabilitation/Reconstruction/Up grading of ABELLANOSA SERVICE ROAD	Abellanosa St.	Concrete	Govt.	-do-	
Preventive Maintenance of BUTUAN CITY-CAGAYAN DE ORO-ILIGAN CITY ROAD	Butuan-CDO-Iligan	Asphalt Overlay	Govt.	-do-	
Road Upgrading of Bypass Road	Lumbia to Ugiaban Road	Concrete	Govt.	-do-	
Preventive Maintenance of National Highway	National Highway Junction-Bulua Road	Asphalt	Govt.	-do-	
Cleaning and clearing of Road Section BCR-Burgos-Alae Section and other City Roads	CDO		Govt.	-do-	
Indahag Resettlement- Construction & concreting of Access Road and Drainage System, Phase I and II	Indahag	Concrete	Govt.	-do-	
Construction of slope protection along CDO Airport-Bukidnon Road	Dansolihon	Stone Masonry/ Concrete	Govt.	-do-	
Repair/Rehab. Of Road Slip along Lumbia-Ugiaban Bypass Road	Dansolihon	Concrete	Govt.	-do-	

Clearing of National Road and various local road including access road to DEPED school site	Cagayan de Oro	Gravel/ Earth	Govt.	-do-	
Construction of roads and Drainage Phase II-Relocation Site	Canitoan	Concrete	Govt.	-do-	
Construction of Calaan Steel Bridge	Calaanan	steel	Govt.	-do-	
Villaverde Resettlement Site Development, Construction of Roads and drainage	Balulang	Concrete	Govt.	-do-	
Upgrading of access roads to Villaverde Resettlement Site	Balulang	Concrete	Govt.	-do-	
Xavier village lower Palalan Resettlement Site Development	Lumbia	Concrete	Govt.	-do-	
Upgrading of Access Road to Xavier Village-Lower Palalan Resettlement Site	Lumbia	Concrete	Govt.	-do-	

5.2 Power

Situational Analysis

Power supply is very important for the city's role as the trade and services center of the region.

Currently, there are two power distribution utilities that serve the city namely, CEPALCO and MORESCO 1; while Minergy serves as power generation company.

CEPALCO serves 103,074 households or 78 percent of the total 131,616 households of the service area as of December 2012. MORESCO 1 serves sixteen (16) barangays in the west with 8,129 households or 68 percent of the 11,896 households of the service area as of December 2012.

Roughly 23 percent of the households are not connected to either CEPALCO or MORESCO 1 due to problems on Right-Of-Way which hampers the installation of distribution lines. Other households do not have the financial capability to have electrical connections, especially those living in the hinterland barangays.

Table 5.14
Number of Households Served by Distribution Utility, 2012
Cagayan de Oro City

Name of Electric Cooperative/ Utility/Barangay	Number of Households Served	Total Number of Households of Service Area	Percentage Served (%)
CEPALCO			
66 barangays (40+26) CDO City	103,074	131,616	78.31
MORESCO-1			
16 barangays	8,129	11,896	68.33
Total Number of HHs served	111,203	143,512	77.49

Source: CEPALCO and MORESCO-1

*Canitoan and Lumbia are served by both CEPALCO and MORESCO-1

According to type of connection, residential use has the highest number of connections for those served by CEPALCO and MORESCO.

However, when it comes to average monthly consumption, residential use posted the lowest. CEPALCO-connected households have higher average

monthly consumptions as compared with those connected by MORESCO 1 since it is serving the greater urban area.

Table 5.15
Number of Connections by Type of Users and Average Consumption (KWHR/mo.), 2010
Cagayan de Oro City

Type of Connections	CEPALCO		MORESCO 1	
	No. of Connections	Ave. Monthly Consumption	No. of Connections	Ave. Monthly Consumption
Residential	84,140	162	7,393	87
Commercial	14,833	1,012	224	482
Industrial	189	43,790	-	-
Bulk Power	9	1,233,032	-	-
Communal Water System	-	-	3	849
Public Bldgs and Facilities	-	-	128	152
Street Lights	128	6,571	856	63

Source: CEPALCO and MORESCO 1

Table 5.16
Projected Power Requirements by Type of Connections (KWH)
Cagayan de Oro City

Connection / User	Projected Power Requirement									
	2012		2013		2014		2015		2016	
	Cepalco	MORESCO -1	Cepalco	MORESCO -1	Cepalco	MORESCO -1	Cepalco	MORESCO -1	Cepalco	MORESCO -1
Residential	162,448,000	8,192,322	167,287,000	8,655,835	172,126,000	9,130,207	176,965,000	9,611,534	181,804,000	10,096,972
Commercial	197,481,000	1,363,046	203,382,000	1,437,161	209,284,000	1,517,300	215,186,000	1,603,941	221,088,000	1,697,692
Industrial	100,015,000	-	100,721,000	-	101,431,000	-	102,147,000	-	102,867,000	-
Bulk Power	142,045,000	-	150,923,000	-	152,651,000	-	150,923,000	-	150,923,000	-
Water System	-	31,012	-	31,477	-	31,949	-	32,429	-	32,915
Public Building	-	242,678	-	252,703	-	263,145	-	274,022	-	285,353
Street-light	10,129,000	674,141	10,431,000	698,974	10,732,000	724,810	11,034,000	751,692	11,336,000	779,664
Total	-	10,503,200	-	11,076,150	-	11,667,411	-	12,273,619	-	12,892,597

Table 5.17
Sectoral Analysis Matrix, Power

Technical findings (Observations)	Implications (Effect)	Recommendation (Intervention)
Load forecast shows a steady increase in the demand	Shortage in power supply which will result into rotating power interruption	Development of additional generation capacity
Shortage in power supply	Slow economic growth	
MORESCO-1 and CEPALCO service areas have been experiencing rapid development	Power demand also increasing	Encourage Independent Power Producers to invest on renewable energy
Frequency and Duration Index below standard	Frequent and long power interruptions	Promotion of energy saving measures (e.g. Green Building Technology, solar energy, LED lights)

5.3 Water

Situational Analysis

Water Supply System

As of 2012, Cagayan de Oro Water District (COWD) served 80.68% of households in the urban area. Table 5.17 below shows the source of water supply system by type and number of household population served in 2012.

Table 5.18
Source of Water Supply System by Type and Number of Household Population Served, 2012
Cagayan de Oro City

Source of Water	Number of HHs served	Percentage to total (%)
Level I	6,395	4.60
Level II	9,793	7.04
Level III	96,034	69.04
<i>Total Number of HHs served</i>	<i>112,222</i>	<i>80.68</i>
No access	26,884	19.32
Total Number of HHs of the City	139,106*	

Source: COWD/CPDO(number of households)

*2012 HHs less doubled-up HHs

COWD extracts its water supply from twenty eight deep wells with a total production average of 53,843,895 cu. m. per year. Bulk water supply from Rio Verde is 40,000 cu. m. per day. The total production output of COWD as of 2012 is 150,270.80 cu. m. per day. Water sufficiency Rate is 44.36 % and Non Revenue Water is 55.64 %.

The urban center is being served by Cagayan de Oro Water District. In 1995, major developments sprouted in the western side of the city resulting in strained water situation until 2006, when Rio Verde Water Consortium started operation to supply bulk water embanked from Cagayan de Oro River.

Major developments in Upper Carmen, namely Xavier Estates, Gran Europa, Camella Homes, and Pueblo Township supplies water from developer-operated deep wells directly to households. The total production output of these four developments is 4,282.56 cu. m. per day serving a total of 5,217 households (Table 5.19).

Table 5.19
Level I Water Supply System by Type and Number of Household
Population Served in Major Developments in Cagayan de Oro City, 2012

Major Development	Deep Well			Water Sufficiency Rate (%)	Non-Revenue Water (%)
	Number	HH Population Served			
		No.	%		
Xavier Estates	2	853	25	82	18
Gran Europa/Camella Homes	3	2,197	100	42	58
Pueblo Township	5	2,167	100	74	26
Total	10	5,217			

Source: A. Brown, *Crown Communities, Pueblo de Oro*

The major developers have operational control of water supply and distribution of the same, namely Xavier Estates, Pueblo Township, Camella Homes and Gran Europa. These major developments have to comply with the water requirement of 150 lpcpd of the Housing and Land Use Regulatory Board guidelines on License to Sell.

The Rio Verde Water Consortium supplies water to COWD by tapping water from Cagayan de Oro River. Currently it supplies 40,000 cu. m. per day. By 2013, the supply will be 80,000 cu. m. per day. The additional 40,000 cu. m. per day is intended for communities in the Uptown.

The main line of Rio Verde, crossing the Cagayan de Oro River at Taguanao, was severely damaged by TS Sendong. Both damaged facilities at Macasandig and damaged main pipe at Taguanao disrupted the supply of water to the urban center of Cagayan de Oro for several days. The occurrence made obvious the lack of redundant pipelines and vulnerability of the production wells at Macasandig.

As experienced by the city during flooding, it exposed the vulnerability of the water distribution system when having only single main distribution line. Obviously, the main pipe was exposed to flooding when it was placed below the maximum flood level. No redundant system exist that when one main pipe fail, main water supply is discontinued as no other main pipe can operate, as redundant.

The vulnerability to flood of water distribution system was shown during TS Sendong. As a quick fix approach, the damaged main pipe was reinstalled underground. A redundant main pipe is the preferred course of action.

DATA ANALYSIS

i. Water Supply System

- a. The level of Non Revenue Water at 55.64% is way above the industry standard of 20-30%. While there are non technical factors that contributes, Non Revenue Water can be addressed by technical approach. Non collection of bills can be accurately determined. COWD can disaggregate the quantity of Non Revenue Water by service areas and establish measuring devices. Then reduce the quantity of Non Revenue Water area by area approach. Obviously, Non Revenue Water is high where informal settlers are dominant.

ii. Current and Projected Needs

- a. Table 5.20 shows the projected demand for Cagayan de Oro within the planning period.

Table 5.20
Projected Water Demand Summary

YEAR	Service Area	
	Cagayan de Oro City	
	Population Served	Water Demand (m3/day) ADD (Average Daily Demand)
2011	549,547	126,055
2012	572,547	131,162
2013	597,411	136,099
2014	628,213	141,108
2015	656,231	146,096
2016	686,128	151,335
2017	718,041	156,554
2018	729,960	159,981
2019	742,363	163,998
2020	754,686	167,752
2021	n/a	n/a
2022	n/a	n/a

Table 5.21
SECTORAL ANALYSIS MATRIX, WATER

Technical Findings (Observations)	Implications (Effect)	Recommendation (Intervention)
High percentage of Non Revenue Water at 55.64 %. The causes are a) leaks along the old asbestos pipes in the eastern part of the city. And non-payment of water bills by the informal settlers. The resulting concern is low pressure at elevated area like Terry Hills and Medium Rise Buildings.	Water supply is scarce as the watershed is depleting through the years. Water conservation and water recycling are programs that the stakeholders adopt.	As Cagayan de Oro is compose of rolling terrain, the water distribution system needs several booster pump installed to equalize the water pressure. Reducing the Non Revenue Water to 20% by 2022 can greatly improved the water distribution system.
High percentage of NRW	High rate of water consumption Low water pressure to no water	Replace Asbestos pipelines Rehabilitate service connection Repair reported mainline and service connection leakages immediately Resolve suspected big leakages
		The Non Revenue Water of COWD reduced to 20% by 2022 A Redundant Water Distribution lines from Rio Verde to urban center by 2022 Stable and adequate water supply and distribution by 2022 for Xavier Estates, Pueblo Township, Gran Europa
No redundant system	No water to affected areas if the system is under repair	Create a redundant system
Insufficient water system that can response to disaster by decreasing vulnerability (like installing flood warning system at deep well stations) and eliminating exposure to hazards (like installing redundant water main pipelines)	Reduce the Non Revenue Water from 55.64% to 20% by 2022; Install redundant water distribution main pipes by 2022 Take operational control of water supply and distribution of major developments ,	Implement water main line redevelopment by replacement leaking asbestos pipes in the east side of Cagayan de Oro. The reduction of Non Revenue water by 35.64% is 44,926.00 cum per day. At P30 per cum, this P 898,520.04 per day or P 26,955,601.20 a month. At P400 per sq m water redevelopment cost, this is 67,389 sq m a

		<p>month or 81 hectares a year. By 2017, 404 hectares of urban center can be redeveloped for water main lines.</p> <p>The two weeks non operation of COWD caused by damaged main pipe at Taguanao is estimated at P 52,943,100.00 loss revenue. The amount is adequate to install the redundant main pipe loop from filtration plant to urban center of Cagayan de Oro.</p> <p>By 2013, additional 40,000 cu m per day supply from Rio Verde is available. The main pipe passes along Masterson Avenue where Xavier Estates, Pueblo Township, Gran Europa and Robinson Homes are located. These developments have to comply with 150 lpcpd as required by Housing and Land Use Regulatory Board Guidelines on Open Market Development. COWD can ably supply the water volume requirement for 150 lpcpd. When the Certificate of Completion of the development has been issued by HLURB, the water system should be turn over to COWD consistent with its franchise as the only water provider for Cagayan de Oro.</p>
--	--	---

Table 5.22
Barangays not served by COWD as of 2012
Cagayan de Oro City

Part of Cagayan de Oro City	Number of Population
Baikingon	2,190
Balubal	3,509
Bayanga	2,809
Bisigan	1,415
Dansolihon	4,979
F.S. Catanico	1,521
Indahag	5,877
Mambuaya	2,097
Pagalongan	1,968
Pigsag-an	944
San Simon	1,495
Taglimao	1,441
Tagpangi	2,450
Tignapoloan	4,585
Tuburan	1,115
Tumpagon	2,168
Part of Opol	
Awang	2,036
Bagoqboc	2,806
Cauyonan	1,421
Limonda	804
Nangcaon	1,085
Patag	2,416
Tingalan	2,170
Total	12,738

Source:

Table 5.23
Damaged COWD Facilities during TS Sendong
Cagayan de Oro City

Facilities	Location	Qty/ Unit	Unit Cost	Total Cost
Old Booster Pump 3-Phase 440V				
200 Hp	Macasandig	2 units	300,000	600,000
125 Hp	Macasandig	2 units	250,000	500,000
100 Hp	Macasandig	1 unit	250,000	250,000
New Booster Pump 3-Phase 440V				
150 Hp	Macasandig	5 units	250,000	1,250,000
Prod. Well Motors 3-Phase 440 V				
125 Hp	PW Nos. 1 & 9	2 units	250,000	500,000
75 Hp	PW Nos. 4 & 7	2 units	250,000	500,000
25 Hp	PW No. 4	1 unit	150,000	150,000
Transformer 333 KVA	Macasandig	2 sets	1,500,000	3,000,000
Transformer Dry-Type 1 MVA	Macasandig	1 unit	1,500,000	1,500,000
Controller				
Soft Starter	Production Wells	3 units	250,000	750,000
Conventional	Production Wells	8 units	250,000	2,000,000
Chlorinator 100 ppd		2 units	250,000	500,000
Generator Set				
219 KVA	Production Wells	3 units	1,500,000	4,500,000
688 KVA	Macasandig	1 unit	1,500,000	1,500,000
437.5 KVA	Macasandig	2 units	1,500,000	3,000,000
165 KVA		1 unit	1,500,000	1,500,000
Laboratory Apparatus & Equipments	Macasandig	1 lot		6,000,000
Booster Station Office Building	Macasandig	1 lot		1,500,000
Booster station Office Furniture and Equipment	Macasandig	1 lot		2,000,000
Service Vehicles		2 units	150,000	300,000
Others				1,000,000
Total				P32,000,000

Source: DRA Report

Table 5.24
DRR-CCA Connectivity Matrix, Water

Element : Built Environment

Descriptor: Highly Competitive/Sustainable Environment

INDICATORS	What is the impact/effect of the indicator in attaining climate resiliency/reduction of disaster risk?	What is the impact/effect of changing climate and the occurrence of disaster to the local government?
Adequate Supply of Potable Water Sources	Sufficient supply of potable water	Insufficient supply of water
Water sufficiency Rate 44.36%	Enough supply of potable water	Decrease of water supply and contamination of water
High-Quality of Water	Water is safe to drink	

5.4 Information and Communications Technology

Situational Analysis

The existing communication facilities in Cagayan de Oro are postal service, seven telephone service providers, three cellular mobile telephone service providers, four telephone long distance exchange (inter. exchange carrier, nine Broadband Networks, one Trunked Radio Station, seven Internet Service Provider (Registered), seven TV Stations, three Cable TV Providers, five AM Broadcast Station, and fifteen FM Broadcast Stations. Table __ below shows the list and details.

Cell Sites

Table 5.25
Inventory of Cell Sites, 2012
Cagayan de Oro City

Location	CELL SITE				
	SMART BROADBAND, Inc.	BAYAN TELECOMMUNICATION	DIGITAL MOBILE PHILS. INC (SUN CELL)	GLOBE TELECOM, INC.	SMART COMMUNICATION
Agusan	1		1	1	3
Baikingon				1	
Bulua	2	1	3	2	5
Balubal					
Balulang	1	1	2	5	2
Bayabas			1		
Bonbon				1	
Bugo			1	2	
Camaman-an			1		1
Canito-an	2	1	1	4	3
Carmen		2	4	7	4
Cugman		1		2	
Gusa	2	1	2		2
Indahag	1			3	2
Iponan			1	1	2
Kauswagan	2	1	3	4	4
Lapasan	1	1		1	4
Lumbia	3		1	2	8
Macabalan				3	
Macasandig	1		1	2	3

Mambuaya					
Nazareth			1	2	
Patag	1	1	1	1	1
Pisag-an					
Puerto	1				3
Puntod	1		1	3	1
San Simon					
Tablon	1		2		

Source:

Cellsites were affected during Typhoon TS Sendong which struck the city on December 16-17, 2011. Mostly affected are cabinets which are located on the ground level and vulnerable to flood at Balulang, Kauswagan and Macasandig.

The vulnerability to flood of communication system was shown during TS Sendong. The cellsites along Cagayan River at Macasandig was exposed when it was placed inside the flood-prone area. The damaged facilities were mostly cabinets.

Table 5.26
Cell Sites affected during TS Sendong
Cagayan de Oro City

Barangays	CMTS Provider	No. of Cellsites	Type of equipment
Balulang	Globe Telecom, Inc	1	Cabinet
Balulang	Smart Communications, Inc	1	Cabinet
Balulang	Digitel Mobile Phils, Inc	1	Cabinet
Barangay 9	Globe Telecom, Inc	1	Cabinet
Canitoan	Globe Telecom, Inc	1	Cabinet
Kauswagan	Digitel Mobile Phils, Inc	1	Cabinet
Macasandig	Globe Telecom, Inc	1	Cabinet
Macasandig	Digitel Mobile Phils, Inc	1	Cabinet

Source: DRA Report

Table 5.27
Damaged Facilities by Typhoon Sendong (Telecom Providers)
Cagayan de Oro City

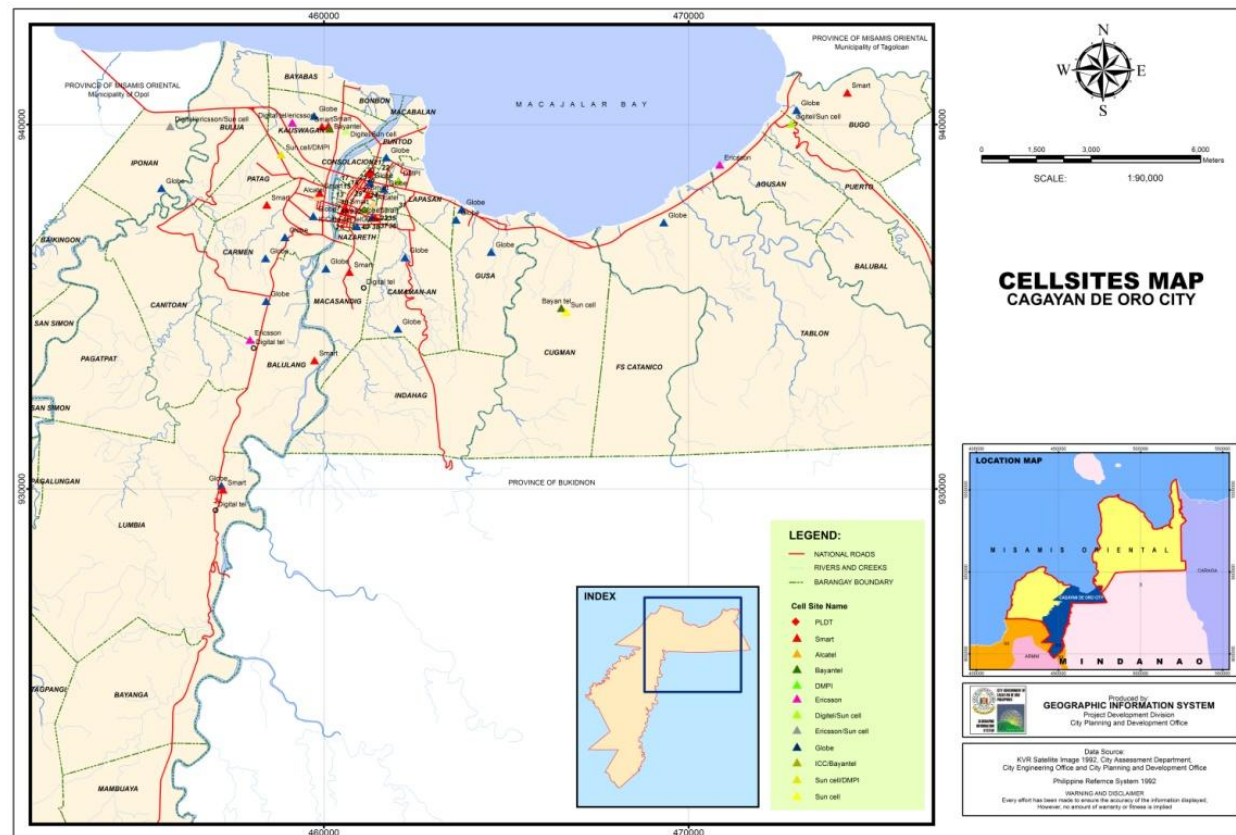
Name of Company	Description of Damaged Equipment	Qty	Unit	Location (Barangay)
Digital Mobile Phils., Inc.	cell site (cabinet)	1	set	Balulang
(Sun Cellular)	cell site (cabinet)	1	set	Kauswagan
	cell site (cabinet)	1	set	Macasandig
Globe Telecom, Inc	Ericsson RBS 2106 G900 Outdoor Type Cabinet 6/6/6	1	set	Balulang
	Ericsson RBS 2106 G1800 Outdoor Type Cabinet 8/5/4	1	set	
	3G Outdoor Type Cabinet 1/1/1	1	set	
	Huawei Wimax Outdoor Type	1	set	
	15KVA Generator Set and ATS	1	set	
	Ericsson RBS 6201 G900 Indoor Type Cabinet 6/6/6	1	set	Barangay 9 (Pob)
	Ericsson RBS 6201 G1800 Indoor Type Cabinet 8/8/8	1	set	
	3G Indoor Type Cabinet 1/1/1	1	set	
	Huawei Wimax Indoor Type	1	set	
	15 KVA Generator Set and ATS	1	set	
	Tellabs 8840	1	lot	Barangay 11(Pob)
	Ericsson BTS 2106 G900 Outdoor Type Cabinet 4/5/6	1	set	Canito-an
	Ericsson RBS 2106 G1800 Outdoor Type Cabinet 3/0/0	1	set	
	3G Outdoor Type Cabinet 1/1/1	1	set	
	Ericsson RBS 2106 G900 Outdoor Type Cabinet 6/6/6	1	set	Macasandig
	Ericsson RBS 6000 G1800 Outdoor Type Cabinet 8/8/8	1	set	
	3G Outdoor Type Cabinet 1/1/1	1	set	
	Huawei Wimax Outdoor Type	1	set	
	Transient Voltage Suppressor	1	pc	
	Emerson Rectifier System with 16 pcs 12V batteries	1	set	
	15 KVA Generator Set and ATS	1	set	
	25 KVA Generator Set and ATS	1	set	
Smart Communications, Inc	1 Cell site (cabinet)			Balulang
Bayan Telecommunications, Inc.	Indoor Type Cabinet	1	set	Canito-an
Misamis Oriental Telephone Service	Cables	300	pair s	Balulang
(MISORTEL)	Cables	200	pair s	Macasandig

CLUP Volume 3 – The Sectoral Studies

PhilCom	Switch Cabinet and Cables			Balulang
	Switch Cabinet and Cables			Canito-an
	Switch Cabinet and Cables			Macasandig
Smart Broadband, Inc.(CRUZTELCO)	Cables			Burgos
	Cables			Consolacion
	Cables			Macabalan
TELOF	Cables, UKRs			Balulang
	Cables			Canito-an

Source: *DRA Report*

Figure 5.3
Cell Sites Map
Cagayan de Oro City



Print Media

Table 5.28
Type of Print Media Available in Cagayan de Oro City

Publication	Publisher	Location	Language Used	Circulation	
				Number	Frequency
Mindanao Gold Star Daily	Goldstar Publishing and Marketing Corp.	Gusa Highway, CDO	English	10,000	daily
SunStar CDO	SunStar Cagayan de Oro Publishing Inc.	Julio Pacana St., CDO	English		daily
SunStar Super Balita			Visayan		daily
Golden Banner	Atty Gil U. Banaag, CPA	Pabayo-Gomez St., CDO	English	1,000 per week	weekly
Katarungan News Daily	Augusto B. Neri III	Tiano-Gomez St., CDO	English	500 per week	weekly
The Mindanao Current	The Oro Current News Corp.	A. Velez St., CDO	English		weekly
Oro News Star	Lulu Lapada		English		weekly
The Cagayan de Oro Times	Cagayan Times	Abellanosa St., CDO	English		weekly
Brigada News Philippines			English		
Reuters					
Business Mirror					
Philippine Daily Inquirer					
Business Week Mindanao	Dante M. Sudaria	Abellanosa St., CDO	English		weekly
News Express		A. Velez St., CDO	English		weekly
	Giovanni A. Flaviano		English		weekly
Mindanao Star Daily	Dante M. Sudaria	Abellanosa St., CDO	Visayan		daily
Business Daily	Dante M. Sudaria	Abellanosa St., CDO			daily
Mindanao Reporter	Mona U. Lagbas	Consolacion, CDO			weekly
The Philippine Observer		Kauswagan, CDO	English		weekly
Benta Birada News Daily	Phelan Taylaran		Visayan		daily
Benta Birada News Daily	Phelan Taylaran		English		weekly

Source: *Philippine Information Agency*

Development Needs

Within the planning period, it is forecasted that the city will utilize communication facilities to mitigate damages in tropical cyclone and the like calamities. This would include installation of the flood warning scheme at places upstream of Cagayan River using mobile phones, provision of backup power supply to communication center that monitor the response to disaster and the installation of redundant land lines for communication lifelines. There is a need to increase telephone density from 4.71 to 10 lines/100 persons. More access to communications will result to easy access to information.

Accurate and timely delivery of information result to awareness/preparedness of the community. With this there is a need of an integrated, reliable and affordable ICT facilities and services.

Table 5.29
SECTORAL ANALYSIS MATRIX
INFORMATION AND COMMUNICATIONS TECHNOLOGY

Technical findings (Observations)	Implications (Effect)	Recommendation (Intervention)
1. Rampant cable theft	Reduce quality of service due to interruptions	Intensify monitoring and enforcement of laws by authorities and TELCOS
2. Hanging and dangling telephone cables and wires (spaghetti)	An eye sore to a developing city	Pursue continuously the cleaning of unnecessary tel. wires and cables.
3. Government telecom facilities needs upgrading	Left behind by current ICT developments	Upgrade government facilities to provide primarily requirements of government entities.
4. No common underground ducts/ raiseways for ICT wires and cables	Spaghetti wires will be addressed permanently	LGU to provide common underground ducts/raiseways for ICT cables and wires
Cagayan de Oro aspires to be a city by the river in a sustainable environment that provides properly placed communication facilities to meet the needs of the highly competitive economy from 2012 to 2022, considering projects that can ably response to disaster by decreasing vulnerability (like installing flood warning system using	Provide communication mix that support warning system for hazards and timely response to disasters	Locate facilities non flood prone area.

installed communications facilities) and eliminating exposure to hazards (like installing early warning system or devices that activate signal of hazards.)		
---	--	--

5.5 Waste Management

Solid Waste and Wastewater Facilities

Cagayan de Oro City Controlled Dumpsite is a product of a loan package granted by the World Bank pursuant to a resolution that the city will provide a controlled garbage dumping area and establish an effective and sanitary waste management system.

The City's 17- hectare Controlled Dumpsite has a distance of 3.7 kilometers away from downtown with an average transportation time of 16 minutes from the poblacion. It has a capacity of approximately 1.9 million cubic meters and is expected to be adequate for 12 to 20 years of use starting 1997.



Current volume of waste collected and dumped averages at approximately 700 cu.m/day. There are data for the waste entering to the dumpsite for the last years, although the accuracy of the control can be questioned.

Carmen dumpsite, although classified as controlled dumpsite is being operated as an open dump (only 7-8 hectares are being used of the 17-hectare area of the facility), fenced in by barbed wires (3 wires on wooden posts) but with some houses within the unused area.

A monitoring record of the average volume of garbage dumped on a monthly basis indicates that August and December has the highest volume of garbage compared to the other months. August being the fiesta month of the city and December as the month of Christmas as shown in the table below.

Table 5.30
Estimated Volume of Garbage Collected and Disposed at City Dumpsite from January to December 2011

Month	City/Clenro Collection	Private Collection	Barangay Collection	BAI Collection	Total Volume of Waste	No. of Loads CPSO/PRIV/ BRGY	BAI TOTAL
January	4,884 cu m	3,805 cu m	2,272 cu m	9753 cu m	20,714 cu m	910 769 427	1077 3,183 L
February	2,178 cu m	3,574 cu m	2074 cu m	11,579 cu m	19,405 cu m	419 425 668	1277 2,789 L
March	1,683 cu m	3,640 cu m	2,517 cu m	14,463 cu m	22,258 cu m	323 733 512	1603 3,171 L

April	1,434 cu m	4,577 cu m	1,528 cu m	13,822 cu m	21,199 cu m	298 796 413	1547 3,054 L
May	1,064 cu m	5,684 cu m	1,508 cu m	15,069 cu m	22,150 cu m	228 903 385	1715 3,231 L
June	173 cu m	4,511 cu m	2,114 cu m	18,147 cu m	24,945 cu m	44 924 459	1908 3,335 L
July	68 cu m	4,053 cu m	2,011 cu m	17,304 cu m	23,436 cu m	28 799 367	2079 3,273 L
August	92 cu m	4,336 cu m	1,842 cu m	18,618 cu m	24,888 cu m	30 935 359	2209 3,533 L
September	296 cu m	4,882 cu m	2,174 cu m	15,230 cu m	22,582 cu m	78 1040 433	1780 3,331 L
October	416 cu m	5,153 cu m	1,686 cu m	14,910 cu m	22,165 cu m	122 999 350	1752 3,223 L
November	381 cu m	4,96 1 cu m	1,990 cu m	14,268 cu m	21,600 cu m	94 1013 401	1663 3,171 L
December	981 cu m	6,848 cu m	2,046 cu m	17,609 cu m	27,484 cu m	222 1431 423	2071 4,147 L
TOTAL :	13,605 cu m	53,981 cu m	24,468 cu m	180,772 cu m	272,826 cu m	2796 10767 5197	20,681 39,441 L

Current general practice on Solid Waste Management is mainly based on “collect and dump”. In the previous years, SWM was under the City Public Services Office (CPSO) it was then that the city managed the waste collection. Currently, waste collection is being undertaken by private contractor which is known as “BASURA AT IBA PA” in sixty three (63) barangays though not the entire area were efficiently collected so 17 barangays have their own garbage collection and disposed it to the City Dumpsite.

In order to augment the personnel of CLENRO to cater to the needs of the Public for efficient and effective delivery of public services the Hon. City Mayor Vicente Y. Emano issued E.O. 117-2011 to immediately transfer supervision of personnel and equipments of Solid Waste Management Division of City Public Services Office (CPSO) to City Local Environment and Natural Resources office (CLENRO).

Two (2) associations of waste pickers composed of a total of 700 members, which control the entry and exit of waste pickers into the dumpsite. Waste in relocation sites (currently four) is collected by the city (not by the private contractor) once a week for each site.



Two (2) other municipalities out of CdeO, such as Opol and Villanueva, also dumped their solid waste in Carmen dumpsite and pay corresponding tipping fees of about PhP300 (if using a six-wheeler truck) and PhP500 if using a ten-wheeler truck. Opol dumps three (3) truckloads of garbage per day while Villanueva dumps two (2) truckloads per day.



Operation of the current disposal facility is handled by the SWM division of CLENRO. No monitoring for collection and dumping of construction waste although medical waste has a separate septic vault in the dumpsite (and transporter has its own key to the vault). There is no actual monitoring for dumping of medical waste, as well as with the used tires.

Source of pollution/contamination affecting the drainage system

URBAN population is imbalanced, it is growing 2.4% annually and 94% of the population is living in urban barangays, this cause the social crisis that the city will be facing and affect the basic services of these is the sanitation. Throwing of garbage into drainage system causes the flooding in the city.

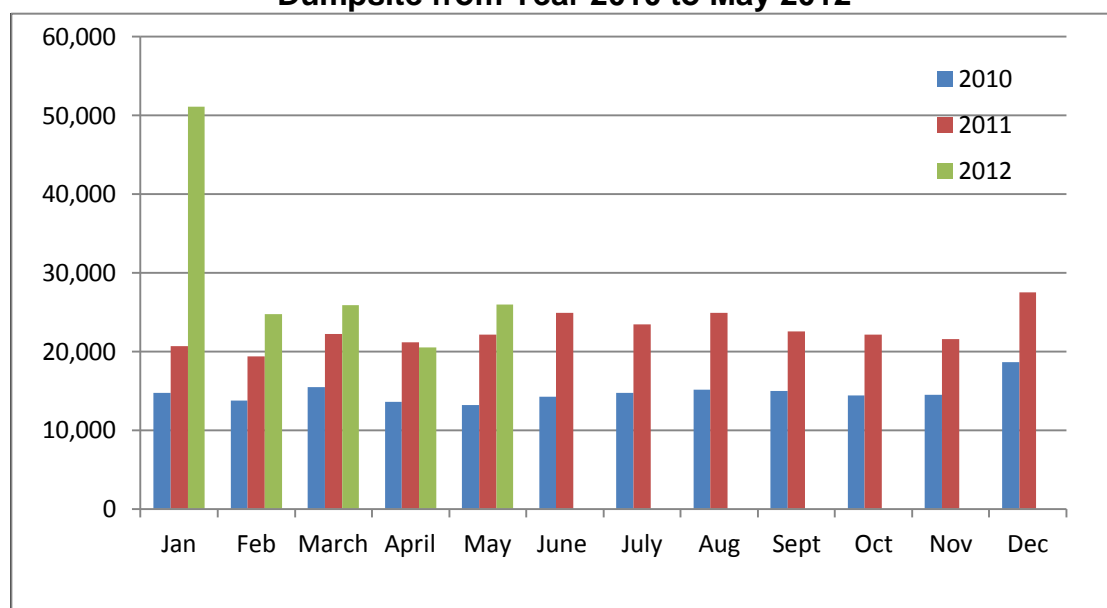
Availability of facilities for waste water collection treatment and disposal would be in a site for the construction of a new sanitary landfill. Efficiency/inefficiency of collection is gauged through complaints and request for collection (lack of monitoring and evaluation of waste contractor).

Impact of the current state of solid waste and wastewater management to the natural ecosystems and health status of the people

There's a minimal waste reduction practices in the barangay; lots of waste end up littering the streets of the city proper and in waterways (minimal implementation of RA 9003):

- Waste segregation
- Recycling
- Composting

Figure 5.4
Comparative flow of solid waste volume collected and dumped at City Dumpsite from Year 2010 to May 2012



The chart presented above shows that there is an increase of volume of solid waste dumped in the City dumpsite for about 98% with an average of 225,164 cu m or 98,396.65 tons.

Current and Projected Needs

Determine the current needs and future requirements for health facilities and personnel as well as burial facilities and solid waste and wastewater management.

1. Dated August 2011, the final draft of the Septage Ordinance was submitted to City Council Committee. In this draft document many relevant issues that might help to improve the conditions of Cagayan de Oro River situation as far as the water pollution concerns.
2. The mentioned draft Septage Ordinance refers to the obligation to identify, to desludge periodically the septic tanks and the necessary treatment of the extracted septage sludge. The septage ordinance lists also the general requirements for that the “Septage Processing and Treatment Plant” shall meet.
3. Establishment of the Sanitary Landfill on the identified strategic site
4. Proper enforcement of the policies as provided for on RA 9003
5. Institution of Waste Water Management and appropriate Drainage System Planning.

Integrated Infrastructure Sector Policy Options

Technical Findings/ Issues/Concerns	Implications <i>If not solved</i>	Policy Options			
		Adaptation Measures		Mitigation Measures	
		Structural	Non-Structural	Structural	Non-Structural
Damaged power system due to flooding	Power shortage/ outage	Develop renewable power generation facilities. Construction of sabo dams	Establish redundant power distribution system. Adopt CCA-DRR coping mechanism in plant designs and operation. Shift to less power consuming technology.	Establish power facilities on hazard free locations.	Adopt (BBB) building back better policy.
Destroyed water system facilities due to flooding	Water supply shortage Contaminated water supply.	Develop/employ innovative water system. Develop potable water resources in higher elevations. Introduce rain-harvesting system and other water impounding facilities in communities	Encourage use of redundant water distribution system. Promote Water conservation practices.		Adopt WQMA policy. Implement/enforce clean water act and other pertinent laws and regulations. Improve/strengthen water supply system's resiliency.

CLUP Volume 3 – The Sectoral Studies

Destroyed telecommunication facilities	Disrupted communication system. Damaged telecommunication facilities	Construct disaster-resilient system (BBB policy)	Mainstream CCA-DRR into the system design and operations.	Rehab/improvement of facilities adopting CCA-DRR.	Develop CCA-DRR technology scheme in establishment of telecommunication network.
Damaged road network <i>Destroyed roads & Bridges.</i>	Traffic congestion. <i>Increased CO2 emissions. High fuel consumption. Reduced accessibility and mobility Hampered delivery of basic goods and services.</i>	Retrofitting of existing bridges. Provide alternative routes and spillways Construction /rehabilitation of roads and bridges.(BBB policy)	Formulation/development of a mass transport plan <i>Adoption of (RBT) Rapid Bus Transport system. Railway system, ferry system.</i>	Construction of fly-over at Recto-Valenzuela Avenue, Recto-Pelaez Blvd. underpass, coastal highway from Bulua to Agusan Construction of hazard-resistant roads and bridges.	Strengthen and strictly enforce traffic rules and regulations. Adopt shift improve and avoid policy Adoption of BBB policy.
Inadequate drainage system Clogged drainage.	Flooding and ponding on streets in CBD	Establishment of a sanitary landfill	Establishment of an effective SWM system.	Improvement of drainage system Repair and Maintenance of drainage system.	IEC on SWM Formulation of a drainage master plan
Destroyed classrooms/school buildings due to hazards	Disruption of classes	Construct high rise and fire proof school buildings Modify existing classrooms/school buildings adopting CCA-DRR.	Enforce CCA-DRR Preparedness scheme Perform	Establish school site in hazard-free area.	Strictly enforce fire code.

CLUP Volume 3 – The Sectoral Studies

Flooded public offices	Hampered delivery of public services. Loss of government revenues.	Relocation of public offices to safer grounds. Construction of disaster resilient office buildings	Enforce CCA-DRR Preparedness scheme	Adoption of green high rise type facilities and utilities Develop/introduce disaster resilient building technology.	Promote Building on stilts. Adoption of “build back better” policy Strict adherence to pertinent building construction requirements Structures should have the lowest floor elevated to not lower than 3 feet from the highest flood level elevation
------------------------	---	---	-------------------------------------	--	---

CLUP Volume 3 – The Sectoral Studies

Assessing Single Actions for DRR- Infrastructure and Utilities Sector

Actions	Implications to DRR Efforts			Implications to Development			Implementation Issues					TOTAL
	Potential to reduce exposure / Risk to Life	Potential to reduce exposure / Risk to Property	Urgency of DRR Action	Negative Consequence of No Action	Impact to Preferred Development	Land Use changes needed	Ease of Implementation	Resources Needed	Policy adjustments needed	Management of Actions Needed	Efficiency of Action	
	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	
Promote water conservation practices												
	2	1	2	2	1	1	2	2	4	3	3	23
Modify water supply facilities to be hazard resilient												
	2	1	3	2	1	1	2	2	4	3	3	24
Dredging of rivers												
	4	4	4	5	4	1	4	3	1	3	3	36
Implement/ Enforce Clean Water Act and other pertinent laws and regulations.												
	1	1	1	2	1	3	3	3	2	2	3	22

CLUP Volume 3 – The Sectoral Studies

Retrofitting of bridges. Construction / rehabilitation of roads and bridges (BBB policy)												
	4	4	4	4	3	3	4	4	2	4	3	39
Adoption/ integration CCA-DRR plan into urban development.												
	4	4	4	4	4	4	4	4	4	4	4	44
Adopt disaster-resilient telecommunication facilities/ system.												
	3	3	3	3	3	4	4	4	4	4	3	38
Adopt Shift Improve and Avoid policy												
	1	1	3	3	3	3	3	3	4	2	2	28

CLUP Volume 3 – The Sectoral Studies

Road Expansion Program <i>Construction of JR Borja-Carmen-Patag skyway/ expressway</i> <i>Construction of fly-over at Recto-Valenzuela Avenue, Recto-Pelaez Blvd. Underpass</i>												
	2	2	3	4	3	4	4	4	3	3	3	35
-Formulation/ development of a Comprehensive Transport Plan -Adoption of (RBT) Rapid Bus Transport System, Railway System, Ferry System.												
	3	2	3	4	4	4	4	4	4	4	4	40

CLUP Volume 3 – The Sectoral Studies

Promote car pooling and use of public utility vehicles												
	3	3	3	3	3	3	3	3	3	3	3	33
Discourage importation of surplus vehicles.												
	2	2	2	2	3	3	3	3	3	3	3	29
Establishment of a modernized traffic light system with CCTV.												
	3	3	3	4	4	4	4	4	5	4	4	42
Establishment of bicycle lanes												
	2	4	2	3	3	3	4	4	3	3	3	34
Shift to less power consuming technology. (Conversion of streetlights to LED Lights.												
	2	2	3	3	2	3	3	3	3	3	3	30

CLUP Volume 3 – The Sectoral Studies

Construction of hazard-resistant roads and bridges.	not hazard related	not hazard related	not hazard related	Inadequate accessibility	Improved accessibility	No change needed in land use	Action is easy to implement. Require assistance from other sources. Technical expertise & enabling environment are present. Feasibility study/proposal	LGU has funds/resources to finance project. May need outside funding... available manpower	Supportive policy No need to enact local laws	Maybe	Yes the benefit out-weighs the cost. Many will benefit from project	
	1	1	1	3	4	3	4	3	4	4	5	33

CLUP Volume 3 – The Sectoral Studies

Establishment of renewable water and power supply system	not hazard related	not hazard related	not hazard related	Inadequate accessibility	Improved accessibility	No change needed in land use	Action is easy to implement. Require assistance from other sources. Technical expertise & enabling environment are present. Feasibility study/proposal	LGU has funds/resources to finance project. May need outside funding... available manpower	Supportive policy No need to enact local laws	Maybe	Yes the benefit out-weighs the cost. Many will benefit from project	
	1	1	1	4	4	3	4	3	4	4	5	34

CLUP Volume 3 – The Sectoral Studies

Establishment of city social services complex-center for street children PWD/vocational center And development-Center for Children with Disabilities.- Center for Senior Citizens- Daycare centers in all relocation sites Establishment of City Sports Complex	not hazard related	not hazard related	not hazard related	Underde veloped pre-school children. Petty street crimes. Sick society. Signifi cant implicatio n in reducing debt. Gains. Putting more lives and propertie s at risk.	Yes it supports the sectoral objective s and compatib le with debt thrust.	No change needed in land use	Action is easy to imple ment. Requires assistanc e from other sources. Techni cal expertise & enabling environ ment are present. Needs FS/ project proposal	LGU has funds/reso urces to finance project. May need outside funding... available manpower	Supportiv e policy No need to enact local laws	Maybe	Yes the benefit out-weighs the cost. Many will benefit from project	
	1	1	1	4	4	3	4	3	4	4	5	34
Introduction of rain-harvesting system and other water impounding facilities in big business establishments												
	1	1	1	4	4	3	4	3	4	4	5	34

CLUP Volume 3 – The Sectoral Studies

Repair and Maintenance of drainage system. (Declogging)												
	1	1	1	4	4	3	4	3	4	4	5	34
Establishment of an effective SWM system <i>Establishment of MRF in clusters of Barangays.</i>												
	1	1	1	4	4	3	4	3	4	4	5	34
Provision of retaining walls/flood control dikes.												
	1	1	1	4	4	3	4	3	4	4	5	34
Rechanelling of River												
	1	1	1	4	4	3	4	3	4	4	5	34
Shift/influence development from danger zone to hazard free areas.												
	4	4	4	4	3	3	4	3	4	4	5	42

CLUP Volume 3 – The Sectoral Studies

Adoption of Geo hazards Consideration in planning and construction. <i>Encourage structures on stilts.</i>												
	1	1	1	4	4	3	4	3	4	4	5	34
Establish school site in hazard-free area.												
	1	1	1	4	4	3	4	3	4	4	5	34
Strictly enforce zoning ordinance and fire code.												
	1	1	1	4	4	2	2	3	4	4	5	31
Adoption of green high rise type facilities and utilities												
	1	1	1	4	4	3	4	3	4	4	5	34

CLUP Volume 3 – The Sectoral Studies

Modification of public offices/ buildings to be disaster resilient. <i>(Retrofitting of public buildings)</i>												
	4	4	4	5	4	1	4	3	1	3	3	36

Integrated Infrastructure Sector Priority Programs and Projects

- Retrofitting of roads and bridges and other infra facilities
- Construction of JR Borja-Carmen-Patag skyway
- Consider geo-technical assessment in land developments
- Construction of new access roads
- Rehabilitation and maintenance of roads
 - Widening of roads to ease access especially during emergency
 - Concreting of roads
 - Asphalt overlaying of roads
- Installation of modern traffic lights and city-wide CCTV
- Provision of user-friendly pedestrian lanes, sidewalk and ramp for PWDs
- Conduct Capacity Building for Traffic Enforcers
- Adoption of Bus Rapid Transit
- Establishment of bicycle lane and rack
- Construction of vertical parking space
- Promotion on the use of paving blocks in open spaces, sidewalks and parking spaces
- Development of redundant power generation system (solar power, etc.)
- Shifting to less power consuming technology (conversion of sodium/CFL lights to LED)
- Installation of additional transmission lines
- Adoption of green bldg. technology (use of renewable energy (solar power);
- Improvement of water supply services (ensuring that the systems are located in hazard free/safer areas)
- Establishment of District Metering Zone (DMZ) to reduce non-revenue water
- Develop springs and other water bodies as sources of potable water.
- Promote water conservation practices
- Preparation of drainage master plan (program)
- Construction of new drainage/canals in built-up areas (divert the flow of water from Bitan-ag Creek to Kulambog Creek)
- Clearing vis-à-vis relocation of informal settlers along waterways (Bitan-ag, Binonoan, Arroyo Creek, etc.)
- Desiltation of waterways
- Construction of detention and retention ponds in large scale development
- Provision of slope protection structures
- Construction of flood control dikes
- Construction of wastewater treatment facility
- Promotion of rain harvesting facility for commercial establishments and residential buildings

- Design regulations for rainfall harvesting, catchment devices and retention basins in new housing development and new settlements
- IEC on the promotion of Rainwater Harvesting Facility
- Promote wireless broadband technology
- Promote full interconnection among telephone service providers
- Full implementation of underground installation of telecommunication lines
- Preparation of 'Green Building' Ordinance
- IEC on Green Building Technology
- Construction of multi-storey building

Annexes

Annex A Social Sector Annex Tables/Matrices

Housing

Annex Table 1
Inventory of Potential Lands for Housing, 2012
Finance Requirements for Housing, 2012-2022

Option House	House Size (m2)	Lot Size (m2)	Total Land (m2)	Land Cost (P)		Land Development Cost (P)		House Construction Cost (P)		Indirect Cost (12%)	Total Unit Cost (P)
				/m2	/unit	/m2	/unit	/m2	/unit		
A. Row House with Land Development (fully subsidized by LGU)-1st income group)	21	40	66.67	400	26,668	600	40,002	6,000	126,000	23,120	215,790
B. Single Attached-2nd Income Group	22	70	108	780	84,240	600	64,800	6,000	132,000	33,724	314,764
C. Single Detached-3rd income group	28	80	123	780	95,940	600	73,800	6,000	168,000	38,369	376,109
D. Duplex-4th income group	30	80	123	400	49,200	600	73,800	6,000	180,000	36,368	339,368
E. MRB (4 storey)-3rd to higher income group	25	0	11	5,000	55,000	1,200	13,200	15,000	371,250	47,784	487,234

Annex Table 2
Informal Settlements Areas, 2011
Cagayan de Oro City

Barangay	Area (Ha)	Land Ownership		Zoning Classification	No. of families	Settler's Origin	Year Occupied	Utilities Present	Entities Providing Asst.	Type of Assistance
		Gov't	Private							
Agusan	3.9		x	Res.	319	-no data-	-no data-	Water	LGU	Assist Assn. Re:
						-no data-	-no data-	Electricity	LGU	Lot acquisition & possible relocation
Balulang	16.4984.33	x	x	Res. Res.	1,21489	-no data-	-no data-	Electricity	LGU	-do-
Bayabas	5.68		x	Res.	671	-no data-	-no data-	Electricity	LGU	-do-
Bonbon	4.74		x	Res.	317	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	26	-no data-	-no data-	Electricity	LGU	
Bugo	-no data -		x	Res.	371	-no data-	-no data-	Electricity	LGU	-do-
Bulua	-no data -		x	Res.	634	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	396	-no data-	-no data-	Electricity	LGU	-do-
Canitoan	-no data -		x	Res.	65	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	66	-no data-	-no data-	Electricity	LGU	-do-
Camaman-an	1.4		x	Res.	515	-no data-	-no data-	Electricity	LGU	
	-no data -	x		Res.	132	-no data-	-no data-	Electricity	LGU	-do-
Carmen	69.28		x	Res.	3,461	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	1,453	-no data-	-no data-	Electricity	LGU	-do-

CLUP Volume 3 – The Sectoral Studies

Consolacion	0.7		x	Res.	177	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	550	-no data-	-no data-	Electricity	LGU	-do-
Cugman	10.5 1		x	Res.	1,072	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	96	-no data-	-no data-	Electricity	LGU	-do-
Gusa	21.2 1		x	Res.	2,406	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	62	-no data-	-no data-	Electricity	LGU	-do-
Indahag	0.33 3	x		Res.	176	-no data-	-no data-	Electricity	LGU	-do-
Kauswagan	0.53		x	Res.	217	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	105	-no data-	-no data-	Electricity	LGU	-do-
Lapasan	3 5.96	x	x	Res. Res.	860 1,413	-no data-	-no data-	Electricity	LGU	-do-
Lumbia	4.5		x	Res.	254	-no data-	-no data-	Electricity	LGU	-do-
Macabalan	15.2 5		x	Res.	594	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	289	-no data-	-no data-	Electricity	LGU	-do-
Macasandig	1.5 0.18	x	x	Res. Res.	210 28	-no data-	-no data-	Electricity	LGU	-do-
Nazareth	13		x	Res.	570	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	87	-no data-	-no data-	Electricity	LGU	-do-
Patag	0.04 81		x	Res.	558	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	370	-no data-	-no data-	Electricity	LGU	-do-
Puerto	0.33 5		x	Res.	52	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	82	-no data-	-no data-	Electricity	LGU	-do-
Puntod	1.2	x	x	Res./ Dang er	574 245	-no data-	-no data-	Electricity	LGU	-do-
Tablon	3.79 5.25		x	Res. Res.	245 1,067	-no data-	-no data-	Electricity	LGU	-do-
Barangay 7	-no data -	x	x	Dang er	53	-no data-	-no data-	Electricity	LGU	-do-
13	-no	x		Dang	370	-no	-no	Electricity	LGU	-do-

CLUP Volume 3 – The Sectoral Studies

	data -			er		data-	data-			
17	0.11 47		x	Res.	71	-no data-	-no data-	Electricity	LGU	-do-
18	-no data -		x	Res.	16	-no data-	-no data-	Electricity	LGU	-do-
26	-no data -		x	Res.	15	-no data-	-no data-	Electricity	LGU	-do-
27	1	x	x	Res. Res.	30 173	-no data-	-no data-	Electricity	LGU	-do-
28	-no data -		x	Res.	49	-no data-	-no data-	Electricity	LGU	-do-
29	-no data -		x	Res.	15	-no data-	-no data-	Electricity	LGU	-do-
30	-no data -	x		RRO W	15	-no data-	-no data-	Electricity	LGU	-do-
31	-no data -		x	Res.	319	-no data-	-no data-	Electricity	LGU	-do-
32	-no data -		x	Res.	30	-no data-	-no data-	Electricity	LGU	-do-
34	-no data -		x	Res.	21	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	73	-no data-	-no data-	Electricity	LGU	-do-
35	-no data -		x	Res.	342	-no data-	-no data-	Electricity	LGU	-do-
36	-no data -		x	Res.	45	-no data-	-no data-	Electricity	LGU	-do-
35 & 36	-no data -		x	Res.	93	-no data-	-no data-	Electricity	LGU	-do-
40	-no data -		x	Res.	7	-no data-	-no data-	Electricity	LGU	-do-
	-no data -	x		Res.	68	-no data-	-no data-	Electricity	LGU	-do-
TOTAL					23,89 3					

Source: Estate Management Division, CPDO

Annex Table 3
Inventory of Residential Subdivisions, 1993-2011
Cagayan de Oro City

Name	Classification	Location	Total Land Area (Has.)	No. of lots/ units
Xavier Heights Housing Project		Upper Balulang	30.0949	1,494
Virginia Homes		Bulao, Iponan	3.8941	255
Villa Angela		Balulang	22.6033	1,297
Promiseland Village		Bulao, Iponan	10.5521	679
Arroville Subdivision		Indahag	7.5105	443
Mother Ignacia Village Phase 1 & 2		Upper Dagong	4.0000	227
Narhills Village		Macasandig	5.0807	690
Soldiers Hill 3. Subdivision		Bulua	5.9191	27
Villa de Gonzalo		Macasandig	.9601	44
GMG Homes		Bulua	.6127	603
Xavier Estates	Res/Com	Upper Balulang	44.5697	1,020
Mountain Meadows Residential Estate Phase1		Gusa	74.2250	1,083
Meadows Hill Ville		Macasandig	13.2850	40
Gene Ramee Ares Subdivision		Canitoan	.8082	107
Gusa Landless Resettlement Association		Gusa	.4326	268
Villa Maria Subdivision		Tablon	.7277	77
Mindanao Homes		Pagatpat	4.5381	419
Puerto Heights Village		Puerto	14.8663	260
Hill Top City (Countryville) Subdivision		Upper Carmen	30.8056	2,601
Immanuel Homes		Macasandig	.4761	27
Melecia Home-2		Upper Macasandig	6.2802	234
Virgíña Homes II		Bulao, Iponan	2.3809	119
PAG-IBIG CITY-FICCO Executive Homes		Iponan	26.0795	1,206
Regency Plain Subdivision Phase II		Bulao, Iponan	12.9178	804
Pueblo de Oro Township Project	Res/Com			
A. Pueblo de Oro Golf Course		Canitoan	85.6316	-
B. Golf Course Res. Lots		Canitoan	48.0000	777
C. Morning Mist Village		Carmen	17.8000	1,211
D. Business Park	Commercial	Carmen	26.5116	124
E. Philamlife Village		Carmen	26.4840	1,040
F. San Agustin Valley Homes I		Canitoan	15.3851	690
La Buena Vida Phase I		Lumbia	10.0000	983
Royal Palm Mansion		Macasandig	1.6106	55
Airport Village		Lumbia	.3508	16
Mountain Meadows Res. Estate Phase II Golf Course		Gusa	216.9477	1,665
Xavier Heights Phase I-A		Upper Balulang	4.0000	197

CLUP Volume 3 – The Sectoral Studies

Meadows Hill Phase II-B		Gusa	4.5000	224
Meadows Hill Phase II-B		Macasandig	23.0190	1,434
Dacudao Subdivision Phase I		Puntod	3.3075	29
Kauswagan-Bonbon International Neighborhood Asso., Inc.		Kauswagan/Bonbon	2.0165	191
Palm Spring Subdivision		Cugman	1.7864	181
West Lane Neighborhood Association		Lumbia	7.0095	456
La Buena Vida Phase II		Canitoan	37.5347	1,182
Xavier Business Park	Commercial	Upper Balulang	5.6635	23
Goking Ville Subdivision Phase II		Bulua	2.0344	130
Rosewood Heights Subdivision		Sta. Cruz, Camaman-an	3.2805	170
St. Joseph Association of Cagayan de Oro Gumamela Urban Poor Association of Tablon		Tablon	11.5191	611
Regency Plain Subdivision		Bulao, Iponan	1.4673	119
Rosario Homes		Lapasan	3.2523	102
Royal Palm Spring Village		Cugman	.5536	31
Gran Europa Homes & Commercial Subd.	Res./Com.	Canitoan	15.4252	95
Southview		Upper Macasandig	5.9096	-
Xavier Estates Phase IV		Upper Balulang	46.8743	906
Xavier Estates Phase III		Upper Balulang	8.1979	115
Golden Glow Village		Canitoan	12.5966	595
Portico		Lumbia	9.8388	-
Patrick Cronin Village Community Association		Camaman-an	2.0039	160
Morning Mist Village II		Canitoan	19.3212	624
San Agustin Valley Homes II		Calaanan, Canitoan	6.5231	520
Starville subdivision project		Anhawon, Bulua	7.2198	301
Woodland Heights Subdivision		Upper Macasandig	8.8650	428
Golden Glow Village		Upper Carmen	2.8135	131
Montaña Vista II		Upper Carmen	7.9763	396
Golden Glow Village Annex		Lumbia	5.2253	210
Westfield Homes		Iponan	7.3340	591
Masterson Mile South		Upper Carmen	1.3705	24
Vista Verde Village I		Canitoan	.7928	24
Vista Verde Village II		Canitoan	7.5899	316
Southview Homes Annex		Upper Macasandig	.6936	24
Forest View		Canitoan	7.2201	892
Cool Breeze Village Subdivision Home-owners Ass.		Lumbia	6.3507	379
Vista Grande		Lumbia	2.6654	204
Greenville Subdivision		Bugo	3.3511	368
Fatima Village Subdivision I		Tablon	.5409	35
Fatima Village Subdivision II		Alae, Upper Puerto	3.1773	131
Vista Verde Village III		Lumbia	.9323	36
Bloomingdale Subdivision Phase I		Iponan	2.3505	85

CLUP Volume 3 – The Sectoral Studies

Bloomington Subdivision Phase II		Iponan	8.9398	609
Phase I - A		Iponan	2.8610	109
Alegria Hills		Camaman-an	8.2000	96
Tuscania Subdivision		Kauswagan	4.4210	239
Bahia Subdivision		Gusa	3.4000	65
Bahia I		Gusa	3.4311	76
Xavier Ville Homes		Balulang	4.8396	138
Holy Cross Height Homeowners Assn., Inc.		Indahag	5.2000	198
La Mirande		Lumbia	11.5416	256
Lessandra		Lumbia	5.6373	566
Westfield Homes Phase II		Iponan	2.0344	163
Portico Phase II		Lumbia	12.4374	705
Silver Creek Subdivision		Carmen	7.1024	484
CDO Coop Town		Lumbia	11.7452	519
Meadows Heights		Lumbia	19.2641	2,355
Richmond Hills Subdivision		Camaman-an	7.2019	283
Bellevue		Carmen	15.0214	720
Fatima West Plain Subdivision		Pagatpat	17.2979	1,154
Fiesno Park View		Lumbia	14.0601	523
Silver Creek Town Homes		Carmen	2.4617	150
Santa Barbara		Kauswagan	6.2896	211
Bloomington Subdivision Phase III		Iponan	13.2414	810
Golden Glow North 2		Upper Carmen	1.5780	69
Vista del Rio Subdivision		Macasandig	5.7647	220
Xavier Estates-Phase 4-E		Upper Balulang	3.6505	49
Bloomington Subd. Phase 4		Iponan	1.9079	60
Forest View Homes Phase 3		Upper Carmen	5.9568	332
Cambridge Subdivision		Iponan	5.2675	383
Teakwood Hills Subd. Phase II		Agusan	-	120
Xavier Estates Phase 5		Balulang	22.0709	411
Saint Therese		Balulang	1.6720	264
Happy Ville Home Owners Ass., Inc.		Lumbia	5.8456	292
CDPRSH-Phase II		Calaanan, Canitoan	3.3038	1,464
Bloomington Subd. Phase 5		Iponan	.9922	88
Golf Estates Cluster 4		Canitoan	1.4777	25
Xavier Estate Phase 5-A		Upper Balulang	9.0957	272
Lourdesville Homes		Balulang	5.7150	316
Oro Housing Coop		Carmen	12.0300	207
United Poor HOA, Inc.		Carmen	.1190	17
City Urban HOA, Inc.		Carmen	4.2580	274
KSS MIE Housing Project		Kauswagan	1.4710	112
Kauswagan Sites & Service Ph. 1		Kauswagan	10.0000	780
Kauswagan Sites & Service Ph. II		Kauswagan	10.0000	545
Kauswagan-Bonbon Int. Neigh, Assn.		Kauswagan	2.0200	188
San Rafael Village		Kauswagan	.3800	38
Lapasan SIR Project		Lapasan	7.5000	645

CLUP Volume 3 – The Sectoral Studies

Zone-3 Bugo HOA, Inc.		Bugo	.1496	100
Patag Upgrading Ph. 1		Patag	1.5000	242
Patag Upgrading Ph. 2		Patag	1.5000	224
6 th Div. Landless Assn., Inc.		Patag	.3980	39
Progressive Village HOA, Inc.		Patag	.0500	34
United Employees Coop		Yacapin Extension	4.0000	198
The Residents Assn. of Vega St., Inc.		R.M. Vega Street	.3530	50
Paglaum Settlers Assn., Inc.			1.9900	188
Xavier Heights Housing		Balulang	35.4970	1,494
CREED Farmers HOA		Balubal	3.9000	162
TELOF X Housing		Macasandig	4.4170	97
TOTAL			1,448.9053	53,683

Source: City Planning and Development Office/National Housing Authority

Annex Table 4
Resettlement Areas, 2011
Cagayan de Oro City

Name of Project	Barangay	Area (has)	Land Ownership	No. of Families	No. of Lots Generated	Utilities/Facilities/Amenities	Administration
Balubal Socialized Housing Project	Balubal	15.9745	LGU	418	554	Lighting, water, school	LGU
MCUPA Socialized Housing Project	Balulang	2.352	LGU	241	241	Lighting, water Covered court, open space	LGU
Lower Balulang Socialized Housing Project	Balulang	0.2511	LGU	57	57	Lighting, water	LGU
Paradise Socialized Housing Project	Bonbon	2.9222	LGU	126	222	Lighting, water	LGU
Bugo Zone-4 Socialized Housing Project	Bugo	1.6392	LGU	122	122	Lighting, water, Covered court, Day Center	LGU
CDORSP-1 Phase 1	Canitoan	26.2473	LGU	762	989	Lighting, water, Covered court, Day Center	LGU
Phase 2A		5.9600		528	656		
Paglaum Socialized Housing Project	Camaman-an	1.117	LGU	103	103	Lighting, water, Day Care Center, Basketball court	LGU
Pag-asa Socialized Housing Project	Camaman-an	.5061	LGU	65	65	Lighting, water	LGU
Paglantaw Socialized Housing Project	Camaman-an	.9943	LGU	37	37	Lighting, water	LGU

CLUP Volume 3 – The Sectoral Studies

Macanhan Socialized Housing Project	Carmen	28.9000	LGU	2,800	2,800	Lighting, water, Covered court, Elementary & High School	LGU LGU
URUMAI Socialized Housing Project	Carmen	.2932	LGU	44	44	Lighting, water	LGU
UMNAI Socialized Housing Project	Carmen	.6599	LGU	77	77	Lighting, water	LGU
AEHA/ ZONACAR	Carmen	2.7297	LGU	298	298	Lighting, water	LGU
PAMANA	Carmen	1.500	LGU	105	105	Lighting, water	LGU
AENA	Carmen	.5000	LGU	41	41		LGU
Manuel Vega	Consolacion	.8599	LGU	111	111	Lighting, water Cemented road	LGU
Cawilihan Socialized Housing Project	Cugman	.9100	LGU	101	101	Lighting, water, Day Care Center, Cemented road	LGU
F.S.Catanico Socialized Housing Project	F. S. Catanico	3.6763	LGU	185	173	Lighting, water	LGU
Flores et. al	Lapasan	.2497	LGU	12	12	Lighting, water	LGU
LUPSUP	Lapasan	1.7042	LGU	326	326	Lighting, water	LGU
Veterans Socialized Housing Project	Lapasan	.1658	LGU	22	22	Lighting, water	LGU
Iponan Socialized Housing Project	Iponan	2.2949	LGU	261	261	Lighting, water	LGU
KAHOA Socialized Housing Project	Kauswagan	1.0066	LGU	109	109	Lighting, water Basketball court , covered court, Day Care Center	LGU
AMOR Socialized Housing Project	Macabalan	4.2657	LGU	350	309	Lighting, water	LGU
Mambuaya Socialized Housing Project	Mambuaya	1.5000	LGU	111	111	Lighting, water	LGU
BUENA ORO (BOHAI)	Macasandig	2.989	LGU	126	126	Lighting, water, Covered court, Day Center Mini market	LGU
Balangay Pangandoy	Macasandig	3.449	LGU	98	240	Lighting, water, Covered Court, cemented road	LGU
Padayon Pilipino Socialized Housing Project	Puntod	1.1760	LGU	118	118	Lighting, water	LGU
TOTAL		116.7936		7,754	8,430		

Source: Estate Management Division, CPD

Annex Table 5
Problem Prioritization Matrix

PROBLEM		CRITERIA																TO TAL (100 %)
		URGENCY (30%)				SERIOUSNESS (30%)				EXTENT (20%)				IMPACT (20%)				
		V U	U	L U	N U	V S	S	L S	N S	V L	L	S	V S	V G	G	N S G	SI	
HOUSING	Presence of families residing in danger area/no build zone and/or private properties	29				27					15			15				86
	Scarcity of affordable residential area and resettlement sites		28				25				15				15			83

Health

Annex Table 6
BHC, Manpower, Service Delivery Package, BEMONC, Catchment Population and Travel Time
Cagayan de Oro City

District	M O	P H N	R H M	S I	T B D O T S	O B P	Physical Condition	Catchment Population	Travel Time to the nearest hospital (gov't)	Travel Time to the nearest hospital (private)
East										
Agusan		1	2	1	0	1	good	15,209	45 mins	15 mins
Balubal		1	1	0	0	1	good	2,918	1 hr 20 mins	30 mins
Bugo		1	2	0	0	1	good	27,800	1 hr	5 mins
Camaman-an		1	2	1	0	1	good	26,165	30 mins	5 mins
Cugman		1	2	1	0	111	good	19,333	30 mins	10 mins
FS Catanico		1	1	0	0		good	1,691	45 mins	20 mins
Gusa		1	1	0	0		good	22,917	25 mins	5 mins

CLUP Volume 3 – The Sectoral Studies

Lapasan		1	2	1	0	1	good	21,669	15 mins	5 mins
-Main		1	1	0	0	1	good	21,669	15 mins	5 mins
-Sto Niño		1	1	0	0	1	good	9,087	1 hr	5 mins
Puerto		1	1	0	0	1	good	17,116	40 mins	15 mins
Tablon		1	1	0	0	1	good			
Central										
Barangay 7			1	0	1	1	at the Brgy Hall	6,026	5 mins	5 mins
Barangay 15	1	1	0	0	1		for construction good	12,305	5 mins	5 mins
Barangay 24			1	0	1	1	For	6,208	5 mins	5 mins
Barangay 26			1	0	1	1	construction for	8,865	5 mins	5 mins
Barangay 31			1	0	1	1	construction equipment destroyed by	10,883	10 mins	10 mins
Consolacion	1	1	0	0	1		good good	10,883	10 mins	10 mins
Macabalan I	1	2	0	1	1		good good	14,263	20 mins	20 mins
Macabalan II	1	1	0	0	1		for	9,118	20 mins	20 mins
Macasandig Main			1	0	1	1	construction good	9,861	15 mins	10 mins
Mandumol			1	0	0	1	under	7,670	15 mins	10 mins
Tibasak			1	0	0	1	construction	4,383	15 mins	15 mins
Nazareth	1	1	0	0	1			13,292	15 mins	10 mins
Puntod	1	1	0	1	1			19,343	15 mins	10 mins
West										
Baikingon	1	1	0	1	1		under construction	2,463	1 hr	1 hr
Balulang Lower	1	1	0	1	1		under construction	15,529	30 mins	30 mins
Xavier H.	1	1	0	0	1		under construction	10,353	20 mins	20 mins
Bayabas	1	1	1	1	1		under construction good	6,900	20 mins	20 mins
Bonbon	1	1	0	0	1			9,889	20 mins	20 mins

CLUP Volume 3 – The Sectoral Studies

District	M O	P H N	R H M	S I	T B D O T S	O B P	Physical Condition	Catchment Population	Travel Time to the nearest hospital (gov't)	Travel Time to the nearest hospital (private)
West										
Bulua		1	2	0	1	1	good	28,965	20 mins	5 mins
Canitoan										
Main			1	0	1	1	under construction	9,663	20 mins	20 mins
good										
Calaanan			1	0	0	1	good	2,4116	30 mins	30 mins
Carmen										
Main		1	3	0	1	1	good	35,072	5 mins	5 mins
Macanhan		1	2	0	0	1	good	23,381	10 mins	10 mins
Iponan		1	1	0	0	1		11,785	30 mins	15 mins
Kauswagan										
Main		1	2	0	1	1	under construction	17,814	15 mins	10 mins
under										
construction										
NHA		1	1	0	0	1	under construction	17,813	20 mins	5 mins
under										
construction										
good										
Pagatpat			1	0	0	1	good	3,107	30 mins	30 mins
good										
Patag		1	2	0	1	1		22,560	10 mins	10 mins
San Simon			1	0	0	1		1,344	45 mins	45 mins
Highland										
Bayanga			1	0	1	1	good	2,585	40 mins	40 mins
Besigan			1	0	0	1	under construction	987	5hrs	5 hrs
good										
Dansolihon			1	0	0	1	under	4,090	1 hr	1 hr
Indahag										
Main			1	0	0	1	construction	2,361	1 hr	45 mins
good										
Taguanao			1	0	0	1	under	1,012	45 mins	30 mins
under										
construction										
Lumbia			1	0	1	1	under	8,946	40 mins	40 mins
under										
construction										
good										
Mambuaya			1	0	0	1	good	1,799	45 mins	45 mins
under										
construction										
Pagalungan			1	0	0	1	good	2,248	2 hrs	2 hrs
Pigsag-an			1	0	1	1	good	1,073	3 hrs	3 hrs
Taglimao			1	0	0	1	good	1,306	2 hrs 30 mins	2 hrs 30 mins
u-const.										

CLUP Volume 3 – The Sectoral Studies

Tagpangi			1	0	01	1		3,390	2 hrs	2 hrs
Tignapoloan			1	0	0	1		4,663	3 hrs	3 hrs
Tuburan			1	0	0	1		1,067	2 h 45	2 h
Tumpagon			1	0		1		1,568	mins	45mins
									4hrs	4 hrs

Annex Table 7
Problem Prioritization Matrix

PROBLEM		CRITERIA																
		URGENCY (30%)				SERIOUSNESS (30%)				EXTENT (20%)				IMPACT (20%)				TOTAL (100 %)
		VU	U	LU	NU	VS	S	LS	NS	VL	L	S	VS	VG	G	NSG	SI	
H E A L T H	●High incidence of maternal/ infant deaths	30				30				20					10			90
	●Increase morbidity and mortality due to lifestyle related diseases such as hypertension, cancer and cardiovascular diseases and diabetes.		25			30				20					10			85
	●Stunted /wasted children among undernourished 0-71 years old		20					20		20				20				80
	●Lack of health facilities and equipment, machines, and ambulance at the city hospital	30				30				20					10			90
	●Lack of area for burial sites		20				30				15				10			75

Education

Annex Table 8
Problem Prioritization Matrix

PROBLEM		CRITERIA																TOTAL (100 %)
		URGENCY (30%)				SERIOUSNESS (30%)				EXTENT (20%)				IMPACT (20%)				
		VU	U	LU	NU	VS	S	LS	NS	VL	L	S	VS	VG	G	NSG	SI	
EDUCATIONAL	Decreasing performance in basic education indicator (NAT, promotion, graduation, survival rates)	25				25					15			15				80
	Lack of school sites, school building, and necessary equipment and facilities	25				25					15			15				80

Protective Services

**Annex Table 9
Protective Services by Facilities and Equipment, 2012
Cagayan de Oro City**

Type of Services	Location	Area (sq.m.)	Number of Personnel	Personnel To Pop'	Facilities & Equipment		Condition
					Vehicle	Others	
Police Headquarter (COCPO)	Gumamela Extension, Carmen	2,974	748	1:856		<ul style="list-style-type: none"> • 20 computers • Internet connection • 1LCD projector • 4 fingerprint kits • Multi-purpose hall • 1 radio bas • 35 handheld radios 	Good
Police Stations							
PS 1	Brgy. 6				1patrol car	<ul style="list-style-type: none"> • 1 radio base • 3 handheld radios • 15 computers 	
PS 2	Cogon Mkt.				1patrol car	<ul style="list-style-type: none"> • 1 radio base • 14 handheld radios • 2 computers 	
PS3	Agora, Lapasan				1patrol car	<ul style="list-style-type: none"> • 1 radio base • 13 handheld radios • 7 computers 	
PS 4	Carmen				1patrol car	<ul style="list-style-type: none"> • 1 radio base • 12 handheld radios • 4 computers 	
PS5	Macabalan				1patrol car	<ul style="list-style-type: none"> • 1 radio base • 10 handheld radios • 3 computers 	
PS6	Puerto				1patrol car	<ul style="list-style-type: none"> • 1 radio base • 9 handheld radios • 4 computers 	
PS7	Bulua				1patrol car	<ul style="list-style-type: none"> • 1 radio base • 4 handheld radios • 6 computers 	
PS8	Lumbia				1patrol car	<ul style="list-style-type: none"> • 1 radio base • 4 handheld radios • 4 computers 	
PS9	Macasandig-dig				1patrol car	<ul style="list-style-type: none"> • 1 patrol car • 5 handheld radios • 4 computers 	
PS10	Cugman				1patrol car	<ul style="list-style-type: none"> • 1 radio base • 5 handheld radios • 4 computers 	
Police Outposts							
PS1 Outpost 1	Gaerlan-Capistrano St.						
PS2 Outpost 1	Jr. Borja-Capt. Vicente Roa						

CLUP Volume 3 – The Sectoral Studies

PS2 Outpost 2	Jr.Borja Extn.-Pres. Quirino St.							
PS2 Outpost 3	Guillermo St.							
PS3 Outpost 1	Gaisano Mall, Brgy 22							
PS3 Outpost 2	National Highway, Gusa							
PS4 Outpost 1	Vamenta Blvd-Seriña							
PS4 Outpost 2	SSS Compound-Vamenta Blvd							
PS4 Outpost 3	Kauswagan							
PS4 Outpost 4	Balulang Landfill							
PS5 Outpost 1	Liko-an Junction, CM Recto-J. Pacana							
PS5 Outpost 2	Corrales Extension-Gaabucayan St.							
PS6 Outpost 1	DMPCI National Highway							
PS6 Outpost 2	Upper Puerto, Alae							
PS7 Outpost 1	Westbound Terminal							
PS7 Outpost 2	Apovel, Patag							
PS7 Outpost 3	Calaanan							
PS8 Outpost 1	Lumbia Roadblock							
PS8 Outpost 2	Brgy. Dansolihon							
PS8 Outpost 3 PS9 Outpost 1	Sitio Buracan, Pagalungan Tomasaco-15 th St. Nazareth							
PS9 Outpost2	Upper Macasandig, 8 th -2 nd Sts.							
PS9 Outpost 3	Buena Oro Subd.							
PS10 Outpost 1	Cugman, National Highway							
CPSC Kinasanghan Outpost	Kinasanghan, Bulua							
CPSC Indahag Outpost	Indahag CDOC							
CPSC Pagalungan Outpost	Pagalungan Police Outpost							
Tourist Police Unit	Hall of Change, COCPO Hqs							
City Public Safety Coy	Co-located with COCPO Hqs.			• 4 patrol cars	• 8 handheld radios • 2 computers			
Traffic Police Unit	Kauswagan							
Bureau of Fire Protection (BFP)								
Central Fire Station	Capt. V. Roa Street	400	Admin - 43		Fire truck	Aerial Ladder Water Tower Snorkel	Good	
			Fire Fighter - 12		Fire truck			
			Emergency		Ambulance		Super Tanker	Critical
			Medical Services - 10		Fire Jeep Motorcycles Tamaraw Fx			

CLUP Volume 3 – The Sectoral Studies

Central Fire Sub-Stations						
Bulua Fire Sub-Station		7				
Bugo Fire Sub-Station		1				
Kauswagan Fire Sub-Station		3				
Carmen Fire Sub-Station		5				
Macabalan Fire Sub-Station		4				
Balulang Fire Sub-Station		1				
Lapasan Fire Sub-Station		5				
Puerto Fire Sub-Station		5				
Macasandig Fire Sub-Station		4				
Bureau of Jail Management Penology (BJMP)						
City Jail, Lumbia						
Male Dorm	1,226.58	69	1:6.9	Prisoners' Van	Telephone	Good
Female Dorm	907.08	21	1:5			

Source: COCPO, BFP, BJMP

Annex Table 10
Barangay Tanod by Type of Services, 2012
Cagayan de Oro City

BARANGAY	Type of Service						Facilities Equipment	Condition of Facilities Equipment
	Number of Volunteer Staff							
	No. of staff	Traffic	Peace & Order	Disaster	Auxiliary Services	Others		
BRGY 01	4	All	All	All	All		2-Handcuff, 1-Multicab	Good
02	5	1	All	4-Reg.	All	1-Driver	Night Stick, Whistle, Handcuff, Raincoat	Good
				6			Uniforms, Multicab	

CLUP Volume 3 – The Sectoral Studies

				Volunteer				
03	7	7	7	-	1	-	Whistle, Night Stick, Uniforms	Good
							Multicab, Megaphone	
04	4	All	All	All	All	-	Night Stick, Whistle, Handcuff, Uniforms	Good
							Bikes, Megaphone, Multicab	
05	5	All	All	All	All	-	Night Stick , Whistle, Handcuff, Uniforms, Multicab	Good
06	14	All	All	All	All	-	Multicab	Good
07	14	-	2	All	All	-	Flashlight, Tear gas, Batuta, Whistle	Good
							Uniforms, Multicab	
08	10	-	3	3	2	1-Driver	Night Stick, Whistle, Handcuff, Uniforms, Multicab	Good
09	15	1	All	All	All	1-Driver	Night Stick , Whistle, Uniforms	Good
							Multicab	
10	11	-	All	All	2	1-Driver	Night Stick, Whistle, Handcuff, Uniforms, Multicab	Good
							Handheld radio-Washed out by Sendong	Poor
11	6	All	All	All	All	-	Whistle Night Stick, Handcuff, Handheld radio	Good
							Megaphone, Multicab	
12	12	-	All	All	1	1-Security	Multicab	Good
13	13	-	13	10	-	1-Driver	Whistle, Batuta, Handcuff	Good
							Megaphone, Multicab	
14	6	1	7	4	3	-	Whistle, Night Stick, Handcuff	Good
							Flashlight, Multicab	

CLUP Volume 3 – The Sectoral Studies

15	11	8	All	All	All	1-Driver	Handcuff, Handheld radio, Night Stick,	Good
							Whistle, Flashlight, Multicab	
16	9	-	All	-	All	2-Driver	B Night Stick, Whistle, Handcuff, Uniforms, flashlight, Multicab	Good
17	8	-	2	-	4	1-Driver	Batuta, Whistle, Handcuff, Uniforms	Good
							Multicab	
18	12	-	All	-	All	-	Night Stick, Whistle, Handcuff, Uniforms, Multicab	Good
19	6	-	All	All	All	1-Driver	Night Stick Whistle, Handcuff, Uniforms, Multicab	Good
20	9	1	All	All	1	1-Driver	Multicab	Good
							Equipment-Washed out by Sendong	Poor
21	15	-	All	All	10	1-Driver	Night Stick, Whistle, Handcuff, Uniforms, Tear gas, Bike, Multicab	Good
22	20	2	All	15	1	1-Driver	Night Stick, Whistle, Handcuff, Uniforms, flashlight, Multicab	Good
23	7	1	6	All	All	1-Driver	Night stick, Whistle, Handcuff, Uniforms, Flashlight, Multicab	Good
24	10	2	All	All	All	1-Driver	Handcuff, Handheld radio, Night Stick, Multi cab, uniforms, flashlight	Good
							Megaphone	
25	23	7	16	-	1	1-Driver	Night Stick, Whistle, Handcuff, Uniforms, Tear gas, flashlight,	Good
							Megaphone, Multicab	
26	15	6	8	5	4	1-Driver	Night Stick, Whistle, Handcuff, Uniforms, flashlight,	Good
				18-Volunteer			Multicab-Under repair	Poor
27	8	-	All	12-Volunteer	8		Night Stick, Handcuff, Uniforms	Good
							Flashlight, Multicab	

CLUP Volume 3 – The Sectoral Studies

28	9	-	4	All	1	-	Night Stick, whistle, Handcuff, uniforms, Tear gas flashlight, Multicab	Good
29	13	1	All	1	1	1- Driver	Whistle, Handcuff, Uniforms	Good
							Handheld radio Base, Megaphone	
							Multicab Night Stick	
30	7	-	All	All	All	2- Driver	Handcuff, Handheld radio, Whistle	Good
							Flashlight, Multicab	
31	15	-	All	-	All	-	Night stick, Whistle, Handcuff, Uniforms, flashlight	Good
							Megaphone, Multicab	
32	21	-	All	-	-	1- Driver	Night Stick , Whistle, Handcuff, Uniforms, Flashlight,	Good
							Multicab-Battery problem	Poor
33	10	3	7	1	-	1- Driver	Night Stick, Whistle, Uniforms,	Good
							Handheld radio, Multicab	
34	6	3	7	-	-	1- Driver	Night stick, Whistle, Handcuff, uniforms, flashlight, multicab	Good
35	20	-	All	All	-	1- Driver	Night stick ,Whistle, Handcuff, Uniforms	Good
							Flashlight, Megaphone, Multicab	
36	15	1	All	All	All	2- Driver	Night stick, Whistle, Handcuff, Uniforms, flashlight, megaphone	Good
							Handheld radio, Multicab	
37	20	4	4	4	1	-	Night stick, Whistle, Handcuff, uniforms	Good
							Flashlight, Handyphone, Multicab	
38	10	1	2	1	1	-	Night stick, Handcuff, Uniforms	Good
							Multicab	

CLUP Volume 3 – The Sectoral Studies

39	19	-	All	All	2	-	Whistle, Multicab	Good
40	9	1	6	-	2	1-Driver	Night stick, Whistle, Handcuff, Uniforms, multicab	Good
							Raincoat, Flashlight w/ alarm	
Agusan	20	4	All	All	15	2-Driver	Night stick, Whistle, Handcuff, Uniforms, Flashlight, Multicab	Good
Balulang	20	-	All	All	1	3-Driver	Night stick, Whistle, Handcuff, Flashlight, 1-multicab	Good
							Megaphone, Handheld radio	
Bayabas	30	6	3x3 shiftin g	4	2	OD-1 chief	Flashlight, Night stick, Handcuff	Good
						2-deputy	Megaphone, Mobile Patrol	
							Raincoat, Rainboots	
Bonbon	19	19	All	All	All	-	7-Handcuff, 7-Night stick, 2-Flashlight	Good
							1-Multicab	
Bugo	29	4	8x3 shiftin g	6	All	-	Night stick, Whistle, Bike, Motorcycle	Good
							Flashlight, Mobile Patrol	
							Raincoat, Rainboots	
Bulua	22	4	18	All	All	4-Driver	Night stick, Whistle, Handcuff,	Good
							Handheld radio, Megaphone,	
							Mini-Dumptruck / Multicab	
Camaman-an	51	5	20	All	1	4-Driver	Night stick, Handcuff, Tear gas, Flashlight, Mobile Patrol	Good
							Uniform, 1-Multicab	
Canitoan	20	All	All	BDRRMC-11 Teams x20	-	-	Raincoat, Rainboots, Motorcycle, Night stick, Handcuff, Flashlight, Whistle, Megaphone, Van, Multicab	Good

CLUP Volume 3 – The Sectoral Studies

Carmen	20 Reg.	6	147	All	All	-	Night stick, Whistle, Handcuff, Handheld radio, Megaphone, Telephone,	Good
	127 Volun						Emergency light , Flashlight , Handheld radio	
Consolacion	22	10	All	All	All	-	Equipment-Washout by Typhoon Sendong	Poor
							1-Multicab	Good
							Mobile Patrol	Critical
Cugman	20	All	All	All	All	-	Radio, Night stick, Raincoat, Rainboots, Mobile Patrol	Good
Gusa	34	7	All	34/26- Volun.	4	4- Driver	Night stick, Whistle, Handcuff, Uniform, Dumptruck, Multicab	Good
							Handheld radio, Megaphone,	
Iponan	20	All	All	All	All	-	Stick, Night stick, Handcuff	Good
							Mobile Patrol	Poor
Kauswagan	33	10	23	33	-	3- Driver	Night stick, Whistle, Handcuff,	Good
				17- Volun.			1-Multicab, Handheld radio	
Lapasan	40	15	All	All	12	6- Driver	Night stick, Whistle, Handcuff, Uniform, Multicab	Good
							Megaphone, Handheld radio,	
							Dumptruck-Under repair	Poor
Lumbia	20	All	All	All	All	-	Raincoat, Rainboots	Good
							Flashlight, Night stick, Handheld radio	
							Mobile Patrol	
Macabalan	24	3	21	All	All	-	Handheld radio, Handcuff, Whistle	Good
							Mobile Patrol	
Macasandig	20	4	20	All	All	-	Handcuff, Whistle, Night stick, Mobile	Good
							Patrol Flashlight, Motorcycle	

CLUP Volume 3 – The Sectoral Studies

Nazareth	30	1	All	All	10	2-Driver	Night stick, Whistle, Handcuff,	Good
							Handheld radio, 1-Multicab	
Patag	18	2	All	All	10	2-Driver	Night stick, Handcuff, Tear gas, Flashlight, 1-Multicab	Good
							Uniform, Megaphone, Handheld radio	
Puerto	20	4	All	5	3	1-Driver	Night stick, Whistle, Handcuff, Uniforms, Multicab	Good
							Flashlight, Handheld radio,	
Puntod	20	2	18	12	4	3-Driver	Handcuff, Tear gas, Flashlight	Good
							Megaphone, Handheld radio	
							1-Multicab	
Tablon	20	5	All	16	1	1-Driver	Night stick, Handcuff, Tear gas, Flashlight, Handheld radio	Good
							Uniform, Megaphone, multi cab	
Rural Brgy.								
Baikingon	20	-	All	All	All	-	Multicab, night stick	-
Balubal	20	-	All	All	All	-	Multicab, night stick	-
Bayanga	13	-	All	All	All	-	Multicab, night stick	
Besigan	20	4	All	All	All	-	20-Whistle, 1-Multicab	Good
Dansolihon	27	-	All	All	All	-	Multicab, night stick	
F.S Catanico	13	-	All	-	-	1-Driver	Batuta, Whistle, Uniforms, Flashlight	Good
							Handheld radio, 1-Multicab	
Indahag	20	-	All	All	All	-	-Multicab, night stick	-
Mambuaya	20	2	All	All	All	-	4-Handcuff, 2-Motorcycles	Good
Pagalungan	18	-	All	All	All	-	-Multicab, night stick	
Pagatpat	22	-	All	All	All	-	-Multicab, night stick	
Pigsag-an	22	-	All	All	All	-	-Multicab, night stick	

CLUP Volume 3 – The Sectoral Studies

San Simon	20	3	All	All	All	-	Handcuff, Whistle, Night stick	Good
							Raincoat, Rainboots	
							Flashlight, Mobile Patrol	
Tagpangi	21	-	All	All	All	-	2-Handcuff, 2-Whistle, 4-night stick	Good
							1-Megaphone, 1-Multicab	
							4-Handheld radio	Poor
Taglimao	30	-	All	All	All	-	-Multicab, night stick	
Tignapoloan	19	-	All	All	All	-	-Multicab, night stick	
Tuburan	20	-	All	All	All	-	-Multicab, night stick	
Tumpagon	14	-	All	All	All	-	-Multicab, night stick	

Source: Project Evaluation Division, CPDO/ Barangay Office

Annex Table 11
Fire Incidence for the last five years, 2007-2011
Cagayan de Oro City

BARANGAY	ORIGIN CAUSE / SOURCE OF FIRE	FREQUENCY OF OCCURRENCE				
		2007	2008	2009	2010	2011
Balulang	Electrical short circuit	1	1	-	-	-
	Under Investigation	2	-	-	1	1
	Rubbish Fire	-	-	1	-	-
	Unattended lighted ember	-	-	1	-	-
	Grounded electrical wirings	-	-	1	-	-
	Intentional	-	-	-	1	1
Bayabas	Under Investigation	1	2	-	-	1
Bonbon	Electrical in nature	1	-	-	-	-
	Under Investigation	-	2	-	1	-
Bugo	Rekindling of live ember	1	-	-	-	-

CLUP Volume 3 – The Sectoral Studies

	Electrical short circuit	1	-	-	-	-
	Under Investigation	-	1	1	-	1
	Unattended Lighted Kerosene lamp	-	1	-	-	-
Bulua	Under Investigation	1	1	2	-	1
	Accidental in nature	2	-	-	-	-
	Electrical wiring connection	1	1	-	-	-
	Decorative lights socket	1	-	-	-	-
	Unattended bonfire	-	1	-	-	-
Carmen	Intentional	1	-	-	-	-
	Under Investigation	7	1	8	5	7
	Overheated electrical wirings	1	-	-	-	-
	Accidental in nature	5	-	-	-	-
	Electrical short circuit	1	-	1	-	-
	Children playing match sticks	-	1	-	-	-
	Unattended lighted candle	-	-	1	-	-
	Grounded electrical wirings	-	-	1	-	-
Canitoan	Under Investigation	1	-	-	1	-
Camaman-an	Under Investigation	1	2	-	2	1
	Accidental in nature	1	-	-	-	-
	Unattended bonfire	-	1	-	-	-
	Electrical short circuit	-	1	1	-	-
Gusa	Under Investigation	3	-	-	1	3
	Kids touched combustible materials using match sticks	1	-	-	-	-
Iponan	Unattended lighted candle or kerosene lamp	1	-	-	-	-
	Intentional	-	1	-	-	-
	Under Investigation	-	1	-	1	1
Kauswagan	Grounded electrical wirings	1	-	1	-	-
	Under Investigation	1	1	1	4	2
	Electrical short circuit	1	-	1	-	-

CLUP Volume 3 – The Sectoral Studies

	Rekindling unattended live embers	-	1	-	-	-
	Defective desk fan	-	-	1	-	-
Lapasan	Accidental in nature	1	-	-	-	-
	Under Investigation	4	1	2	1	1
	Electrical short circuit	-	3	1	1	-
	Grounded electrical wirings	-	1	-	-	-
Lumbia	Overheated electric fan plug	1	-	-	-	-
	Under Investigation	-	1	-	2	-
Macabalan	Under Investigation	1	-	-	-	1
	Match stick played and ignited by kids	-	-	1	-	-
Macasandig	Spontaneous combustion	1	-	-	-	-
	Unattended Lighted kerosene lamp	-	1	-	-	-
	Under Investigation	-	1	-	1	1
	Overheated electrical wire/bulb	-	-	1	-	-
	Unattended lighted candle	-	-	1	-	-
	Electrical short circuit	-	-	1	-	-
Nazareth	Overheated electric fan	2	-	-	-	-
	Under Investigation	1	1	1	4	2
	Electrical short circuit	-	1	1	-	-
Puntod	Unattended lighted candle	1	1	-	-	-
	Under Investigation	1	-	3	1	2
Patag	Accidental in nature	1	-	-	-	-
	Under Investigation	-	-	-	2	-
Puerto	Intentional	1	-	-	-	-
	Under Investigation	1	-	-	3	-
	Electrical short circuit	-	1	-	-	1
Tablon	Accidental in nature	2	-	-	-	-
	Overloaded electrical wirings	-	1	-	-	-
	Oil that leaked & caught fire from firewood	-	-	-	-	1

CLUP Volume 3 – The Sectoral Studies

	Under Investigation	-	-	1	-	-
Cugman	Unattended live ember	-	1	-	-	-
	Sparked/arced melted wire	-	-	1	-	-
	Under Investigation	-	-	3	2	2
Agusan	Under Investigation	1	-	-	1	-
	Overheated ballasted of fluorescent lamp	-	-	1	-	-
	Gas fumes ignited to welding-sparks	-	-	1	-	-
Indahag	Grounded electrical wirings	-	-	1	-	-
	Unattended lighted candle or kerosene lamp	-	-	-	1	-
Consolacion	Under Investigation	-	-	1	-	-
Dansolihon	Unattended Lighted kerosene lamp	-	-	-	-	1
Barangay 01	Under Investigation	-	-	1	-	2
Barangay 03	Under Investigation	-	-	-	1	-
Barangay 04	Under Investigation	-	-	1	-	-
Barangay 05	Under Investigation	-	-	-	-	1
Barangay 06	Under Investigation	1	-	-	-	-
Barangay 08	Positive battery terminal	-	1	-	-	-
	Under Investigation	-	-	-	1	-
	Electrical short circuit	-	-	-	-	1
Barangay 09	Under Investigation	-	-	-	-	1
Barangay 10	Under Investigation	-	-	-	1	-
Barangay 14	Under Investigation	-	-	1	-	1
Barangay 15	Under Investigation	-	-	-	-	1
Barangay 17	Under Investigation	1	-	-	-	-
Barangay 20	Intentionally set by a man on board a motorcycle	1	-	-	-	-
Barangay 21	Electrical short circuit	-	1	-	-	-
Barangay 22	Electrical wirings	-	-	1	-	-
	Under Investigation	-	-	1	1	-

CLUP Volume 3 – The Sectoral Studies

Barangay 23	Electrical short circuit	-	-	1	-	-
Barangay 25	Under Investigation	-	-	1	-	-
Barangay 26	Under Investigation	1	-	-	-	-
	Discarded lighted cigarette butt	-	-	1	-	-
Barangay 27	Under Investigation	-	-	1	1	-
Barangay 28	Under Investigation	-	1	-	-	-
Barangay 30	Electrical short circuit	-	-	1	-	-
	Under Investigation	-	-	-	1	2
Barangay 31	Under Investigation	-	-	-	-	1
Barangay 32	Rekindling of live ember	1	-	-	-	-
	Under Investigation	1	-	-	-	-
Barangay 33	Electrical short circuit	-	1	-	-	-
	Under Investigation	-	1	-	-	-
Barangay 34	Under Investigation	-	-	1	-	-
Barangay 35	Electrical short circuit	-	-	-	-	1
Barangay 38	Under Investigation	-	-	2	-	-
TOTAL :		63	39	56	42	42

Annex Table 12
Crime Incidence by Barangay, by Type, By Sex of offender, 2009-2011
Cagayan de Oro City

Barangays	Type of Crimes	2009		2010		2011	
		Male	Female	Male	Female	Male	Female
Agusan	Index Crimes	22	2	97	4	70	1
	Non-Index Crimes	24	0	74	2	40	0
	Total	48		177		111	
Baikingon	Index Crimes	1	0	1	0	1	0

CLUP Volume 3 – The Sectoral Studies

	Non-Index Crimes	1	0	1	0	1	0
	Total	2		2		2	
Balubal	Index Crimes	2	1	4	0	7	1
	Non-Index Crimes	3	2	6	0	4	0
	Total	8		10		12	
Balulang	Index Crimes	7	2	16	1	4	0
	Non-Index Crimes	7	1	9	3	8	2
	Total	17		29		14	
Brgy 1	Index Crimes	13	2	39	0	23	1
	Non-Index Crimes	0	0	14	0	7	0
	Total	15		53		31	
Brgy 2	Index Crimes	7	0	40	1	23	0
	Non-Index Crimes	1	0	9	0	9	1
	Total	8		50		33	
Brgy 3	Index Crimes	19	2	50	0	37	2
	Non-Index Crimes	9	0	12	0	5	0
	Total	30		62		44	
Brgy 4	Index Crimes	7	2	43	1	25	2
	Non-Index Crimes	6	0	7	1	2	0
	Total	15		52		29	
Brgy 5	Index Crimes	17	0	58	1	50	3
	Non-Index Crimes	3	0	14	2	16	3
	Total	20		75		72	
Brgy 6	Index Crimes	8	0	22	1	8	0
	Non-Index Crimes	2	0	11	0	0	1

CLUP Volume 3 – The Sectoral Studies

	Total	10		34		9	
Brgy 7	Index Crimes	6	0	15	2	10	0
	Non-Index Crimes	0	0	5	0	2	1
	Total	6		22		13	
Brgy 8	Index Crimes	13	1	81	14	47	7
	Non-Index Crimes	7	0	32	4	15	1
	Total	21		131		70	
Brgy 9	Index Crimes	4	0	39	2	37	0
	Non-Index Crimes	3	0	7	1	5	0
	Total	7		49		42	
Brgy 10	Index Crimes	3	0	7	1	10	3
	Non-Index Crimes	1	1	5	0	3	0
	Total	5		13		16	
Brgy 11	Index Crimes	9	1	40	2	22	2
	Non-Index Crimes	5	0	10	0	5	0
	Total	15		52		29	
Brgy 12	Index Crimes	8	0	40	0	31	1
	Non-Index Crimes	2	1	4	1	8	0
	Total	11		45		40	
Brgy13	Index Crimes	6	0	9	0	12	0
	Non-Index Crimes	2	1	14	0	4	0
	Total	9		23		16	
Brgy 14	Index Crimes	3	1	29	2	28	1
	Non-Index Crimes	1	0	5	0	7	0
	Total	5		36		36	

CLUP Volume 3 – The Sectoral Studies

Brgy15	Index Crimes	5	1	10	0	6	1
	Non-Index Crimes	1	1	6	0	3	0
	Total	8		16		10	
Brgy16	Index Crimes	7	0	32	1	9	0
	Non-Index Crimes	0	0	6	0	1	0
	Total	7		39		10	
Brgy17	Index Crimes	6	2	9	1	5	0
	Non-Index Crimes	4	0	5	0	8	0
	Total	12		15		13	
Brgy18	Index Crimes	2	0	5	0	11	0
	Non-Index Crimes	0	0	5	0	1	0
	Total	2		10		12	
Brgy19	Index Crimes	4	0	9	0	14	0
	Non-Index Crimes	1	0	2	4	1	1
	Total	5		15		16	
Brgy 20	Index Crimes	8	0	30	0	24	1
	Non-Index Crimes	2	0	7	1	3	1
	Total	10		38		29	
Brgy 21	Index Crimes	3	0	13	2	9	0
	Non-Index Crimes	2	1	1	0	1	0
	Total	6		16		10	
Brgy 22	Index Crimes	6	0	15	0	16	1
	Non-Index Crimes	1	0	1	0	5	0
	Total	7		16		22	
Brgy 23	Index Crimes	8	0	8	0	13	0

CLUP Volume 3 – The Sectoral Studies

	Non-Index Crimes	5	1	5	1	3	0
	Total	14		14		16	
Brgy 24	Index Crimes	7	0	3	0	7	0
	Non-Index Crimes	0	0	2	0	3	0
	Total	7		5		10	
Brgy 25	Index Crimes	29	4	68	24	55	16
	Non-Index Crimes	11	1	17	1	4	1
	Total	45		110		76	
Brgy 26	Index Crimes	17	2	44	13	31	8
	Non-Index Crimes	2	1	3	0	8	1
	Total	22		60		48	
Brgy 27	Index Crimes	7	2	6	0	33	2
	Non-Index Crimes	4	1	1	0	3	1
	Total	14		7		39	
Brgy 28	Index Crimes	6	0	18	1	9	0
	Non-Index Crimes	1	0	2	0	1	0
	Total	7		21		10	
Brgy 29	Index Crimes	4	1	18	0	14	0
	Non-Index Crimes	1	0	0	0	3	0
	Total	6		18		17	
Brgy 30	Index Crimes	1	1	1	0	5	0
	Non-Index Crimes	0	0	0	0	0	0
	Total	2		1		5	
Brgy 31	Index Crimes	37	7	38	5	50	4
	Non-Index Crimes	8	0	17	1	14	3

CLUP Volume 3 – The Sectoral Studies

	Total	52		61		71	
Brgy 32	Index Crimes	20	4	48	1	47	4
	Non-Index Crimes	7	0	2	0	8	0
	Total	31		51		59	
Brgy 33	Index Crimes	37	5	107	3	66	9
	Non-Index Crimes	10	2	4	0	10	0
	Total	54		114		85	
Brgy 34	Index Crimes	19	4	15	0	13	0
	Non-Index Crimes	5	0	2	0	8	0
	Total	28		17		21	
Brgy 35	Index Crimes	8	2	10	0	17	1
	Non-Index Crimes	12	5	6	0	2	2
	Total	27		16		22	
Brgy 36	Index Crimes	2	0	6	0	13	1
	Non-Index Crimes	1	0	0	0	4	0
	Total	3		6		18	
Brgy 37	Index Crimes	4	1	14	1	17	1
	Non-Index Crimes	3	1	0	0	3	0
	Total	9		15		21	
Brgy 38	Index Crimes	27	2	29	2	32	0
	Non-Index Crimes	9	1	5	1	9	0
	Total	39		37		41	
Brgy 39	Index Crimes	25	3	21	3	26	4
	Non-Index Crimes	2	0	2	0	0	0
	Total	30		26		30	

CLUP Volume 3 – The Sectoral Studies

Brgy 40	Index Crimes	14	2	15	1	19	0
	Non-Index Crimes	8	0	3	1	5	0
	Total	24		20		24	
Bayabas	Index Crimes	3	0	11	0	7	0
	Non-Index Crimes	11	0	1	1	0	0
	Total	14		13		7	
Bayanga	Index Crimes	3	1	7	0	6	0
	Non-Index Crimes	2	0	1	0	2	0
	Total	6		9		8	
Besigan	Index Crimes	0	0	0	0	0	0
	Non-Index Crimes	0	0	0	0	0	0
	Total	0	0	0	0	0	0
Bonbon	Index Crimes	9	0	14	1	4	0
	Non-Index Crimes	10	0	7	0	0	0
	Total	19		22		4	
Bugo	Index Crimes	43	2	146	5	105	7
	Non-Index Crimes	24	1	89	8	62	3
	Total	70		248		177	
Bulua	Index Crimes	87	1	154	5	140	7
	Non-Index Crimes	35	2	24	1	37	2
	Total	125		184		186	
Camaman-an	Index Crimes	36	2	32	4	39	0
	Non-Index Crimes	28	3	5	0	9	0
	Total	69		41		48	
Canitoan-an	Index Crimes	15	1	31	1	34	1

CLUP Volume 3 – The Sectoral Studies

	Non-Index Crimes	11	0	4	1	15	0
	Total	27		37		50	
Carmen	Index Crimes	97	7	192	15	69	7
	Non-Index Crimes	67	6	71	8	37	5
	Total	177		286		118	
Consolacion	Index Crimes	25	1	48	3	18	2
	Non-Index Crimes	37	3	34	2	25	1
	Total	66		87		46	
Cugman	Index Crimes	24	2	124	3	147	12
	Non-Index Crimes	8	1	93	6	86	4
	Total	35		226		249	
Dansolihon	Index Crimes	7	0	5	0	4	0
	Non-Index Crimes	5	0	4	0	6	0
	Total	12		9		10	
F. S. Catanico	Index Crimes	1	0	2	0	4	0
	Non-Index Crimes	1	0	2	0	3	0
	Total	2		4		7	
Gusa	Index Crimes	12	4	47	0	55	1
	Non-Index Crimes	9	0	13	0	21	1
	Total	25		60		78	
Indahag	Index Crimes	12	0	18	0	12	0
	Non-Index Crimes	4	1	5	0	2	0
	Total	17		23		14	
Iponan	Index Crimes	23	2	42	4	37	3
	Non-Index Crimes	24	2	11	0	8	0

CLUP Volume 3 – The Sectoral Studies

	Total	51		57		48	
Kauswagan	Index Crimes	24	3	63	3	18	2
	Non-Index Crimes	25	3	10	2	8	0
	Total	55		78		28	
Lapasan	Index Crimes	34	1	101	6	140	4
	Non-Index Crimes	15	3	13	0	67	2
	Total	53		120		213	
Lumbia	Index Crimes	36	4	77	2	52	3
	Non-Index Crimes	67	8	39	1	22	1
	Total	115		119		78	
Macabalan	Index Crimes	81	4	104	5	75	4
	Non-Index Crimes	99	8	75	14	76	1
	Total	192		198		156	
Macasandig	Index Crimes	73	3	137	11	129	6
	Non-Index Crimes	39	6	71	9	51	5
	Total	121		228		191	
Mambuaya	Index Crimes	5	0	3	0	6	0
	Non-Index Crimes	5	0	3	0	3	0
	Total	10		6		9	
Nazareth	Index Crimes	71	8	153	4	112	1
	Non-Index Crimes	23	7	49	6	44	1
	Total	109		212		158	
Pagalungan	Index Crimes	7	0	2	0	3	0
	Non-Index Crimes	8	1	2	1	1	0
	Total	16		5		4	

CLUP Volume 3 – The Sectoral Studies

Pagatpat	Index Crimes	8	0	9	0	3	0
	Non-Index Crimes	2	0	0	0	0	0
	Total	10		9		3	
Patag	Index Crimes	10	0	32	1	6	2
	Non-Index Crimes	4	1	2	1	3	1
	Total	15		36		12	
Pigsag-an	Index Crimes	0	0	1	0	1	0
	Non-Index Crimes	2	0	1	0	2	0
	Total	2		2		3	
Puerto	Index Crimes	56	0	184	9	139	6
	Non-Index Crimes	27	1	118	10	74	2
	Total	84		321		221	
Puntod	Index Crimes	54	7	125	7	64	1
	Non-Index Crimes	65	10	69	3	43	0
	Total	136		204		108	
San Simon	Index Crimes	4	0	1	0	1	0
	Non-Index Crimes	3	1	4	0	3	0
	Total	8		5		4	
Tablon	Index Crimes	35	2	97	4	106	4
	Non-Index Crimes	24	0	69	4	59	4
	Total	61		174		174	
Taglimao	Index Crimes	3	0	1	0	0	0
	Non-Index Crimes	7	1	3	0	1	0
	Total	11		4		1	
Tagpangi	Index Crimes	5	0	2	0	4	0

CLUP Volume 3 – The Sectoral Studies

	Non-Index Crimes	5	0	2	0	3	0
	Total	10		4		7	
Tignapoloan	Index Crimes	7	0	9	1	1	0
	Non-Index Crimes	4	0	2	0	0	0
	Total	11		12		1	
Tuburan	Index Crimes	3	0	3	0	1	0
	Non-Index Crimes	0	0	1	0	2	0
	Total	3		4		3	
Tumpagon	Index Crimes	3	1	5	0	3	0
	Non-Index Crimes	2	0	0	0	0	0
	Total	5		5		3	
Total	Index Crimes	1,384	113	3,204	184	2,551	151
	Non-Index Crimes	879	90	1,241	102	1,027	53
Total Volume of Crime		2,466		4,731		3,782	

Source: COCPO

Annex Table 13
Problem Prioritization Matrix

PROBLEM		CRITERIA																
		URGENCY (30%)				SERIOUSNESS (30%)				EXTENT (20%)				IMPACT (20%)				TOTAL (100 %)
		VU	U	LU	NU	VS	S	LS	NS	VL	L	S	VS	VG	G	NSG	SI	
P R O T E C T I V E	•Inadequate protective services, man power, equipment and facilities (patrol cars, rescue equip., scientific and forensic equip., police and fire fighting facilities and police outpost/fire and jail building and personnel)		25				25				15			15				80

Sports and Recreation

Annex Table 14
Existing Sports and Recreational Facilities by Barangay, 2012
Cagayan de Oro City

Barangay	A r e a	Ports Facilities	Owner-ship	Physical Condition Good/Poor/ Critical	Recreational Facilities	Owner ship	Physical Condition Good/Poor/ Critical
District -1							
Baikingon		Basketball Court(3)	Public	Good	Dual Zip Line	Public	Good
Balulang		Basketball Court(1)			Shopping Mall/Cinema	SM	
		Tennis Court	Searsolin (Private)	Good			
		Tennis Court	SDA (Private)	Good			
		Sports & Country Clubs	Xavier Estates	Good			
Bayabas		Covered Court	Public	Good	Victoria Beach Resort	Private	Good
		Basketball Court			Lago Beach Resort	Private	Good
Bayanga		Covered Court	Public	Good	Zip Line	Public	Good
		Basketball Court			Macahambus Adventure Park	Public	Good
Besigan		Covered Court	Public	Good			
Bonbon		Covered Court	Public	Good	El Dorado Beach Resort	Private	Good
		Basketball Court			Maandig Beach Resort	Private	Good
		Tennis Court			Raagas Beach Resort	Private	Good
		Children's Play Ground					
Bulua		Covered Court (4)	Public	Good	Library/Reading Center	Public	Good
		Basketball Court School Playground			Bernales Cockpit Arena	Private	Good

CLUP Volume 3 – The Sectoral Studies

		Tennis Court	Private	Good	De Oro Saga Resort Video Game Shops	Private	Good
Canitoan		Covered Court	Public	Good			
		Basketball Court School Play Ground					
Carmen		Covered Court (5)	Public	Good	Country Village Hotel w/ Resort	Private	Good
		Basketball Court	COC		Middleton Apartelle w/ Resort	Private	Good
		Play Ground	St.Mary's Academy	Good	Pryce Plaza Hotel w/ Resort	Private	Good
				Good	Guani Cockpit Arena	Private	Good
		Golf Course	Pueblo de Oro	Good	Video Game Shops	Private	Good
		Gymnasium	LDCU	Good	Plaza (Macanhan)	Public	
		Tennis Court	Pryce Plaza Hotel St. Mary's Academy	Good			
Dansolihon		Covered Court	Public	Good			
		Basketball Court					
Iponan		Covered Court	Public	Good	Brgy. Plaza (6,087.43 sq.m.)	Public	Good
		Basketball Court Softball Field		Need Improvem ent	Mini-Plaza (4,929.75 sq.m.)	Public	Good
					Video Game Shops	Private	Good
Kauswagan		Covered Court	Public	Good	Plaza/Play Ground	Public	Good
		Basketball Court			Video Game Shops	Private	Good
Lumbia		Covered Court	Public	Good	Macahambus Cave	Public	Good
		Basketball Court	Public	Good	Video Game shops	Private	Good

CLUP Volume 3 – The Sectoral Studies

Mambuaya	Covered Court	Public	Good	Monigue Cave	Public	Good
	Basketball Court			Water Rafting Station	Private	Good
	School Play Ground	Public	Good	Mini-Park	Private	Good
Pagalungan	Covered Court	Public	Good			
	Basketball court	Public	Good			
	School Playground					
Pagatpat	Covered Court	Public	Good	Brgy. Plaza	Public	Good
	Basketball Court					
Patag	Covered Court	Public	Good			
	Basketball Court					
	Golf Course	4th IB PHIL. ARMY	Good			
	Tennis Court					
	Soccer Field					
Pigsag-an	Covered Court	Public	Good			
	Basketball Court					
	School Playground					
San Simon	Covered Court	Public	Good			
	Basketball Court					
	School Playground					
Taglimao	Covered Court	Public	Good			
	Basketball Court	Public	Good			
	School Play Ground					
Tagpangi	Covered Court	Public	Good			
	Basketball Court	Public	Good			
	School Playground					
Tignapoloan-loan	Covered Court	Public	Good	Plaza (2) -Also utilized as playground	Public	Good
	Basketball Court					
Tuburan	Covered Court	Public	Good	Barangay Plaza	Public	Good

CLUP Volume 3 – The Sectoral Studies

	Basketball Court					
	School Playground					
Tumpagon	Covered court					
	Basketball Court	Public	Good			
	School Playground					
DISTRICT -2						
Agusan	Covered Court	Public	Good	Gymnasium	Public	Good
	Basketball Court					
	Volleyball Court	Public	Good			
	School Play Ground					
Balubal	Covered Court	Public	Good			
	Basketball Court					
	Tennis Court					
	Volleyball Court					
	School Playground					
Bugo	Covered Court	Public	Good	Reading Center	Public	Good
	Basketball Court			Gymnasium		
				Plaza/Park (3,348.18 sq.m.)include Brgy. Hall	Public	Good
	Tennis Court	Private	Good	Video Game Shops	Private	Good
Camaman-an	Covered Court (3)	Public	Good	Video Game Shops	Private	Good
	Basketball Court					
Consolacion	Covered Court	Public	Good			
	Basketball Court					
Cugman	Covered Court	Public	Good	Marco Hotel w/ Resort	Private	Good
	Basketball Court			Video Game Shops	Private	Good
	Alwana Sports Complex	Private	Good	ECO Malasag Tourist w/ Resort	Public	Good
	Golf Course	Private	Good	Chali Beach Resort	Private	Good

CLUP Volume 3 – The Sectoral Studies

		School Play Ground	Public	Good	Mapawa Nature Park	Private	Good
F.S Catanico		Covered Court	Public	Good			
		Basketball/Volleyball Court					
		School Play Ground					
Gusa		Tennis Court	Private (Villa Ernesto Sub.)	Good	Harbor Lights Hotel w/ Resort	Private	Good
		Covered Court	Public	Good	Gusa Sports Arena (cockpit)	Private	Good
		School Play Ground					
		Basketball Court					
		Gusa Sports Complex					
		Bowling Center Shuttle Square	Private	Good			
		Pelota Court					
Indahag		Covered Court	Public	Good			
		Basketball Court					
		School Playground					
		Volleyball Court					
Lapasan		Covered Court	Public	Good	Video Game Shops	Private	Good
		Basketball Court	Public	Good			
		School Play Ground					
Macabalan		Tennis Court	Public	Good	Reading Center		
		Basketball Court					
		Covered Court					
Macasandig		Tennis Court	Public	Good	Auditorium, Gym (school)		
		Basketball Court			Reading Center		
		Covered Court			Plaza/Play Ground (4,170.05 sq.m.)		
					Video Game Shops		

CLUP Volume 3 – The Sectoral Studies

Nazareth		Tennis Court (1,142 sq.m.)	Public	Good	Reading Center		
		Basketball Court			Plaza/Play Ground (4,588.88 sq.m.)		
		Covered Court			Video Game Shops	Private	Good
					Sport Zone	Private	Good
Puerto		Basketball Court	Public	Good	Barangay Library	Public	Good
		Covered Court					
Puntod		Basketball Court	Public	Good	Reading Center	Public	Good
		Covered Court					
Tablon		Tennis Court	Public	Good	Reading Center	Public	Good
		Basketball Court			Akuna Beach Resort	Private	Good
		Covered Court			Coco Bay Beach Resort	Private	Good
		School Play Ground					
Barangay 01		Tennis Court	Public	Good	Gaston Park (10,520 sq.m.)	Public	Good
02					Video Game Shops	Private	Good
03					Video Game Shops	Private	Good
04					Video Game Shops	Private	Good
05					Golden Friendship Park (6,905.78 sq.m.)	Public	Good
06					Auditorium(Lourdes College)	Private	Good
					Amphitheater	Public	Under cons
07		Basketball Court	Public	Good	Reading Center	Public	Good
08		Basketball Court	Public	Good			
09					Video Game shops	Private	Good
10					Video Game shops	Private	Good
11					Video Game shops	Private	Good
12					Video Game shops	Private	Good

CLUP Volume 3 – The Sectoral Studies

13	Basketball Court	Public	Good			
14				Video Game shops	Private	Good
15	Basketball court	Public	Good			
	Children's Playground					
16	Basketball Court	Pilgrim Christian College	Good	Video Game Shops	Private	Good
	Volleyball Court					
17	Basketball Court	Public	Good			
18	Basketball Court	Public	Good	Video Game Shops	Private	Good
19	Basketball Court	School	Good			
20	Basketball Court	Montessori de Oro	Good	Video Games Shops	Private	Good
	Covered Court					
21	Basketball Court	School	Good			
22	Tennis Court	Capitol University Private	Good			
	Basketball Court School Play Ground (Capitol University)		Good			
23	Tennis Court	Southern Philippine College	Good			
	Basketball Court					
	Covered Court					
	School Play Ground (SPC)	Private	Good			
24	Basketball Court	Public	Good			
25	Basketball Court	Public	Good			
26	Basketball Court	Public	Good	Shopping Mall/Cinema	Private	Good
27	Tennis Court	Public	Good	McArthur Park (12,035.19 sq.m.)	Public	Good
	Basketball Court					
	Half Court					
28	Basketball Court	Public	Good			

CLUP Volume 3 – The Sectoral Studies

29		Gregorio Pelaez					
		Sports Center (43,646 sq.m.)	Public	Good	City Public Library	Public	Good
		City Central Covered Court	Public	Good			
30					Video Game Shops	Private	Good
31		Billiard Hall	Private	Good	Video Game Shops	Private	Good
		Basketball Court	Public	Good	Shopping Mall/Cinema		
		Bowling Center	Private	Good	Atrium		
32		Basketball Court	Public	Good	Video Game Shops	Private	Good
33					Movie House	Private	Good
34					Video Game Shops	Private	Good
35		Basketball Court					
36							
37							
38							
39							
40		Multipurpose covered court	Public	Good	Video Game Shops	Private	Good
		Tennis Court			Library (XU)	Private	Good
		School Play Ground (XU School)	Private	Good			

Source: Project Evaluation Division, CPDO

Annex Table 15
Problem Prioritization Matrix

PROBLEM		CRITERIA																
		URGENCY (30%)			SERIOUSNESS (30%)				EXTENT (20%)						IMPACT (20%)			TOTAL (100 %)
		VU	U	LU	NU	VS	S	LS	NS	VL	L	S	VS	VG	G	NSG	SI	
S P O R T S	Inadequate auxiliary facilities and sports venue		25				25				15			15			80	

Social Welfare

Annex Table 16
Social Welfare Facilities, Services and Clientele, 2011
Cagayan de Oro City

Barangay	Facilities	Physical Condition	Services	Type of Clientele	No. of Clientele	Organization	Staff Compliment
52 Barangays of CDO	171 Day Care Centers	6 DCC-TD 5DCC-PF 19 DCC-flooded needs repair	<ul style="list-style-type: none"> Day Care Services Supplemental Feeding 	Children (3-5) years old	F-3,736 M-3,769	-	165 Day Care Workers 5DCC Monitors 5DTL
Barangay 24	Social Laboratory	Needs improvement	<ul style="list-style-type: none"> Self & Social Enhancement Program Stimulation & Therapeutic Activity 	Children with Disability	64 CWDS	-	2

CLUP Volume 3 – The Sectoral Studies

Macanhan, Carmen	Social Dev't Center	Needs Improvement/ repair	<ul style="list-style-type: none"> •Residential Care •Educational Services •Court Hearings •Value Formation •Health care •Skills Training 	Children	38	-	3 - Regular 7 - Casual 4 - Job Order
Lumbia	Boys Town of CDO	Needs improvement/ repair	<ul style="list-style-type: none"> •Residential Care/Home Life Activity •Educational Services •Values Formation •Health Care 	Children (7-17) years old	30	-	3 – Regular 2 – Job Order 7 – Detailed
	Tahanan ng Kabataan	Needs Perimeter Fence	<ul style="list-style-type: none"> •Temporary Parental Custody(w hile trial proceeding is on going •Rehabilitati on program at RRCY •Diversion Program 	Youth	53 minors offender	-	3 – Regular 3 – Casual 4 – Job Order 4 – Detailed
80 Barangays with 5 Districts	-	Needs Training Center	<ul style="list-style-type: none"> •Peer group Services, Socio-Cultural Developme nt & Psycho-Social Intervention Program •Skills Training •Livelihood Program •Educational Program 	Youth	462 OSY's	-	18 – Regular 8 – Casual 7 – Job Order

CLUP Volume 3 – The Sectoral Studies

80 Barangays	-	Needs Training Center	<ul style="list-style-type: none"> •Parent Effectiveness Service •Responsible Parenthood Service •Special Program to Solo Parent •Assistance to Families in Crisis Situation; financial, medical, transportation, food, burial, legal •Pre-marriage counseling •Skills Training •Livelihood (SEA-K) •Pantawid Pamilyang Pilipino Program 	Disadvantaged Families	-6,568 Families	-	18 – regular 8 – Casual 7 – Job Order
				4 Ps	2,112 Families	-	-
80 barangays with 5 Districts	-	Needs Training Center	<ul style="list-style-type: none"> •Advocacy on Woman's Law's Magna Carta •Skills Training •Livelihood •Gender Sensitivity/ Analysis 	Disadvantaged Woman	1,158	-	1 – Focal Person 5 – District stuff
80 Barangays with 5 Districts	-	Needs Office for Persons with Disability	<ul style="list-style-type: none"> •Assistive Devices •Provision of ID for discounted transportation fare and medicines •Food 	<ul style="list-style-type: none"> •Persons with Disabilities •Older Persons (Senior Citizen) 	412 35,000	-	-

CLUP Volume 3 – The Sectoral Studies

			<ul style="list-style-type: none"> Assistance • Discounted Fare and Medicines • Socialization 				
Carmen (JRBMH Compound)	Residential Care for Elderly	Critical Needs Priority Action	<ul style="list-style-type: none"> • Temporary Shelter • Medical Assistance • Counseling and Family Re-integration Service • Burial Assistance 	Unattached and Abandoned Aged	17	-	2 – Regular 4 – Casual 5 – Job order 2 – Detailed
28 Barangays of CDO	-	No Evacuation Centers for the 2 Districts	<ul style="list-style-type: none"> • Emergency Shelter Assistance • Emergency Relief Assistance • Cash for Work Program • Cash for Training for Program • Food for Work Program • Disaster Preparedness Training 	Victims of Natural and Human-Made Disaster	3,470 Families	-	
46 Barangays of CDO	-	No Evacuation Centers for the 2 Districts	<ul style="list-style-type: none"> • Temporary Shelter for Survivors • Relief Assistance • Recovery and Rehabilitation Program; livelihood, cash for work, food for work 	Victims of Flashflood/ Sendong	12,965 Facilities (House-owners)	-	-

Annex Table 17
Problem Prioritization Matrix

PROBLEM	CRITERIA																
	URGENCY (30%)				SERIOUSNESS (30%)				EXTENT (20%)				IMPACT (20%)				TOTAL (100 %)
	VU	U	LU	NU	VS	S	LS	NS	VL	L	S	VS	VG	G	NSG	SI	
·Families with low/Insufficient income		23				23			20					16			82
·Lack of evacuation center for flood prone barangays		23				22				18				15			78
·High incidence of street families, children, elderlies		25				20				15				10			70
·High incidence of out of school youth and drop outs rate	25					25				15				15			80
·High early pregnancy rate			20			20				15				15			70
·Increasing number of delinquent youth		25				25				15				15			80
·High incidence of abused women and children		26				25				16				12			79
·Establishment of home for the mentally challenged			20				20				10				10		60

Annex B

Economic Sector Annex Tables/Matrices

Industry

Annex Table 18
HISTORICAL DATA ON INDUSTRIAL AREAS (in has.)
Cagayan de Oro City, 2007- 2013

Location	Industrial Areas (in hectares)						
	2007	2008	2009	2010	2011	2012	2013
District 1							
Baikingon	-	-	-	-	-	-	-
Balulang	-	-	-	-	.141500	.141500	-
Bayabas	-	-	-	-	-	-	-
Bayanga	-	-	-	-	-	-	-
Besigan	-	-	-	-	-	-	-
Bonbon	-	-	-	-	-	-	-
Bulua	1.253900	1.253900	1.027600	1.527100	1.527100	3.157400	3.157400
Canitoan	-	-	-	-	-	-	-
Carmen	-	-	-	-	-	-	-
Dansolihon	-	-	-	-	-	-	-
Iponan	-	-	-	-	-	-	-
Kauswagan	4.807500	4.807500	4.299500	2.148500	2.148500	2.654300	3.649200
Lumbia	-	-	-	-	-	-	-
Mambuaya	-	-	-	-	-	-	-
Pagalungan	-	-	-	-	-	-	-
Pagatpat	-	-	-	-	-	-	-
Patag	-	-	-	-	-	-	-

CLUP Volume 3 – The Sectoral Studies

Pigsag-an	-	-	-	-	-	-	-
San Simon	-	-	-	-	-	-	-
Taglimao	-	-	-	-	-	-	-
Tagpangi	-	-	-	-	-	-	-
Tignapoloan	-	-	-	-	-	-	-
Tuburan	-	-	-	-	-	-	-
Tumpagon	-	-	-	-	-	-	-
Sub-Total	6.061400	6.061400	5.327100	3.675600	3.817100	5.9532	6.8066
District 2							
Agusan	4.370800	4.370800	4.370800	4.370800	4.370800	4.370800	4.370800
Balubal	-	-	-	-	-	-	-
Bugo	20.86990	20.86990	20.971700	21.766000	.524800	2.096900	2.096900
Camaman-an	-	-	-	-	-	-	-
Consolacion	1.664700	1.664900	.864100	.864100	1.144400	1.096400	1.096400
Cugman	14.65745	14.65745	13.8997.50	10.219500	14.69085	14.60465	15.41085
F. S. Catanico	-	-	-	-	-	-	-
Gusa	-	-	-	-	-	-	-
Indahag	-	-	-	-	-	-	-
Lapasan	.080600	.080600	.080600	.080600	.080600	.080600	.080600
Macabalan	.022000	.022000	-	-	-	-	-
Macasandig	-	-	-	-	-	-	-
Nazareth	-	-	-	-	-	-	-
Puerto	1.000000	1.000000	1.640000	-	1.640000	3.412300	3.412300
Puntod	20.41880	20.41880	21761000	21.632300	21.76090	26.80804	26.80804
Tablon	56.57983	56.57983	70.445082	75.281589	82.53368	82.53368	82.53360

CLUP Volume 3 – The Sectoral Studies

Brgy. 1	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-
23	-	.142600	.142600	.142600	.142600	.142600	.142600
24	-	-	-	-	-	-	-
25	.077200	1.098200	1.098200	1.098200	1.098200	1.098200	1.098200

CLUP Volume 3 – The Sectoral Studies

26	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-
29	-	-	.021517	-	-	-	-
30	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-
Sub-total	119.66408	120.90508	135.295349	135.455689	127.98683	136.24417	143.85689
Grand Total	125.72548	126.96648	140.622449	139.131289	131.80393	142.19737	143.85689

Source: City Assessment Department

Annex Table 19
Inventory of Existing Industrial Establishments by Intensity and
Capitalization, Cagayan de Oro City

Barangay	Name of Industrial Establishment	Land Area (has)	Intensity Classification	Capitalization/ Total Gross (in P)	Employment
AGUSAN	GSR GRACIAS INC.			-	5
	SAV HOLLOWBLOCKS MAKER		2	-	2
	BAKERY		1	150,000.00	2
	PURIFIED WATER		1	152,619.35	3
	BAKERY		1	168,480.00	3
	LIFE DROPS WATER REFILLING STATION		1	169,000.00	1
	ALPHA HEALTH PURIFIED DRINKING WATER		1	220,000.00	1
	<i>(Not specified, taxpayer Reyes, Renante Royo)</i>		1	312,000.00	3
	SOUTHERN EAGLE SUMMIT, INC.		2	500,000.00	4
	DECIPAK INC.			11,206,387.77	15
	UNILEVER RFM ICE CREAM, INC.		1	257,247,202.67	0
	PEPSI COLA PRODUCTS PHILS.,INC.		2	1,107,132,510.00	18
BAIKINGON	LORENZO POULTRY FARM		2	2,019,064.32	5
BALUBAL	BALUBAL INTEGRATED SOC. FORESTRY FARMERS ASS., INC		1	325,000.00	2
BALULANG	BASIC KNEAD BAKERY-BALULANG CDO BRANCH		1	-	2
	ATHIRA BAKESHOP		1	-	2
	RIGHT PURE WATER REFILLING STATION		1	33,000.00	1
	SPRING HEIGHTS PURIFIED DRINKING WATER STATION		1	48,000.00	1
	BAKERY		1	95,317.69	3
	LIME SPRING PURIFIED DRINKING WATER		1	100,000.00	2
	DIVINE SPRING PURIFIED DRINKING WATER		1	108,000.00	2

CLUP Volume 3 – The Sectoral Studies

	REID'S BAKESHOP		1	129,792.00	2
	<i>(Not specified, taxpayer Labis, Janeth B.)</i>			180,000.00	2
	ZMM COCO LUMBER & CONSTRUCTION SUPPLY		2	187,200.00	0
	THIS AND THAT STORE & BAKERY		1	199,000.00	3
	DUTERTE ENTERPRISES		1	300,000.00	1
	SUN Q TECHNICAL TRADING COMPANY, INC.		2	300,000.00	3
	AJ'S NEW WATER NATURE REFILLING STATION		1	308,000.00	2
	MICABANI'S U & I ENTERPRISES		2	338,000.00	4
	BAKERY		1	360,000.00	0
	MIGHTY L & K FOODS, INC		1	867,285.36	3
	MINDANAO MATCH CORPORATION		2	922,957.92	4
	BAKERY		1	1,000,000.00	3
	BAKERY		1	2,430,022.61	4
	FOOD PRODUCTS		1	3,380,000.00	6
	JYSIUS BAKESHOP		1	3,854,822.40	5
	MINDANAO PAPER PRODS. CORP.			36,336,155.88	13
	AGRINANAS DEVELOPMENT CO., INC.		2	250,875,193.11	25
BARANGAY 01	FOOD PRODUCTS		1	78,000.00	3
	KUBAYAN SUMMIT FARMS, INC.		2	2,398,436.00	1
BARANGAY 02	M. ESCAÑO FOOD PRODUCTS		1	62,530.00	
	MICHAEL ANN BAKESHOP		1	2,376,000.00	5
	KATHRYN BAKESHOP - BRANCH 2		1	4,000,000.00	29
BARANGAY 03	UNIPRINT INK & TONER WORKS		2	200,000.00	2
	SOMETHING SWEET BY ANN		1	1,800,000.00	4
BARANGAY 04	PHANIE BAKESHOP		1	440,000.00	2
BARANGAY 05	GEALQUI VENTURES CORPORATION		1		4

CLUP Volume 3 – The Sectoral Studies

				375,000.00	
	GOLDILOCKS		1	26,956,745.40	10
	KATHRYN BAKESHOP		1	33,265,800.00	15
BARANGAY 06	FOOD PRODUCTS			172,380.00	2
BARANGAY 07	JULIES BAKESHOP		1	2,950,000.00	8
BARANGAY 08	FLORIANNE'S CAKE BLOOMS & DECORS		1	156,000.00	4
	NEW LEAF BAKESHOP		1	929,500.00	17
	PERSIMMON FASTFOOD & BAKESHOPPE CO,		1	2,990,990.00	0
	SN FOOD PRODUCTS		1	3,215,826.13	6
	SHANGHAI BISCUIT FACTORY		1	14,019,047.90	27
	RED RIBBON BAKESHOP, INC.		1	16,003,185.66	12
	SPLASH CORPORATION		2	17,241,343.41	5
BARANGAY 09	REDBERRY BAKESHOP		1	10,000.00	4
	TWIN HEAD FURNITURES & HOME DECORS		1	585,200.00	0
	CECIL'S SNACK INN AND BAKESHOPPE		1	2,368,963.58	8
BARANGAY 10	RCO DURIAN CANDY MAKING		1	295,000.00	3
	CLASSIC WOOD PRODUCTS		1	800,000.00	1
	BIEMA TRADING INC.		1	1,487,838.85	13
BARANGAY 11	POP ROCK FOOD COMPANY, INC.		1	-	9
	THE CAKERY		1	374,400.00	5
	FOOD PRODUCTS		2	480,000.00	6
	ABC GARMENTS		1	7,803,653.00	10
BARANGAY 12	BAKERY		1	242,611.20	0
	LAMAR BAKESHOP, INC.		1	5,291,000.00	6
BARANGAY 13	TUBOD SA TUBIG WOOD WORKS		1	30,000.00	
	BAKERY			72,600.00	0

CLUP Volume 3 – The Sectoral Studies

BARANGAY 14	AXELUM RESOURCES CORP.			84,240.00	1
	BUCO CORPORATION			187,200.00	1
	MAMA JANEY BAKESHOP		1	200,000.00	3
	FURNITURE		1	2,015,000.00	3
	FRESH FRUIT INGREDIENTS, INC.		1	3,042,000.00	5
	FIESTA BRANDS INC.		1	7,507,500.00	15
BARANGAY 15	LIVING WATER FILTRATION & REFILLING STATION		1	87,901.63	4
	CALANGI-ALEJANDRINO ENTERPRISES			156,000.00	2
BARANGAY 16	MAMA JANEY BAKESHOP		1	169,000.00	2
BARANGAY 17	BAKERY		1	-	3
	TIMBAL BAKESHOPPE		1	187,200.00	4
BARANGAY 18	LIMONERO FRUIT DRINKS		1	94,691.04	2
	STAGE PURE PURIFIED DRINKING WATER		1	860,000.00	2
	SOLAR INDUSTRIES		1	15,000,000.00	30
BARANGAY 19	DON MIGUEL BAKESHOPPE		1	845,000.00	3
	LAMAR BAKESHOP, INC.		1	1,040,000.00	2
BARANGAY 20	MIGGYS SWEET HAVEN BAKESHOPPE		1	162,425.20	3
BARANGAY 21	CARMONA FOOD PRODUCTS		1	639,550.08	0
	HEAVEN'S COOL WATER		1	700,000.00	4
BARANGAY 22	FRUITYSNACK, INC.		1	-	13
	MN BAKESHOPPE		1	180,000.00	0
	WAFFLE TIME, INC.		1	202,731.61	2
	AQUA FONTAINE DRINKING WATER SALES		1	365,000.00	2
	PHILIPPINE BELT MANUFACTURING CORPORATION		2	8,200,000.00	6
BARANGAY 23	WATERVILLE WATER REFILLING STATION		1	60,000.00	1
	COR-BEN BAKESHOP		1		2

CLUP Volume 3 – The Sectoral Studies

				110,500.00	
	TPG MARKETING & INDUSTRIAL CORP.		1	499,999.99	0
	R.M. DENTAL LABORATORY		1	641,222.40	5
BARANGAY 24	RVA EASY CRAFT PLAQUES AND TROPHIES		1	50,000.00	3
	DESSERT STRIP BISTRO		1	84,500.00	1
	RBJ ENTERPRISES		1	500,000.00	2
	BREAD UNIQUE INC.		1	2,552,105.86	9
	FIL-PACIFIC APPAREL CORPORATION		2	3,272,656.87	5
BARANGAY 25	WAFFLE TIME, INC.		1	4,118,400.00	2
	GAISANO CITY		1	8,531,222.22	5
BARANGAY 26	<i>(Not specified, taxpayer Flores, Jhoan Cablinda)</i>		1	-	4
	KINGSTREAM PURIFIED DRINKING WATER		1	369,000.00	0
	WAFFLE TIME, INC.		1	950,186.83	2
	SHANGLAM BAKERY		1	3,861,000.00	7
	VIRGINIA FOOD, INC.		1	5,876,364.00	3
	GAISANO CITY MALL		1	11,557,400.00	5
BARANGAY 27	PHIL. ENVIRONMENTAL & ECOLOGICAL DEV. ASSN., INC.		2	-	15
	WAFFLE TIME, INC.		1	50,000.00	1
	LCC AQUA PURE WATER REFILLING STATION		1	180,000.00	1
BARANGAY 29	DOJ GRAPHICS AND MEMORIAL ARTS		2	78,000.00	1
	MAMA JANEY BAKESHOP		1	365,000.00	3
BARANGAY 30	BIG FLAT BREAD		1	58,500.00	11
	DOUGHS & SAUCES PRODUCTION INC.		1	234,000.00	5
BARANGAY 31	DESSERT STRIP BISTRO		1	120,000.00	3
	CDO PRINT CREATIONS		1	563,795.90	2
	ROBINSON'S SUPERMARKET CORP.		1	601,336.12	0

CLUP Volume 3 – The Sectoral Studies

	YOUNG REPUBLIC OUTFITTERS, INC.		1	2,392,787.49	0
	KRISPY KREME		1	5,000,000.00	0
	LIMBROS ENTERPRISES INCORPORATED			16,450,000.00	40
	GOLDILOCKS		1	39,738,560.82	25
	MANDAUE FOAM INDUSTRIES, INC.		2	46,716,992.74	13
BARANGAY 32	KATHRYN BAKESHOP		1	4,999,999.00	10
BARANGAY 33	BAKEY		1	539,136.00	5
	CAGAYAN 168 CORPORATION		1	1,050,000.00	2
	GAISANO SUKICLUB		1	2,262,000.00	0
	PERSIMMON FASTFOOD & BAKESHOPPE CO.		1	2,999,999.00	11
	MADELICIOUS BAKE SHOP		1	3,650,400.00	6
	PERSIMMON FASTFOOD & BAKESHOPPE CO.		1	4,999,999.00	10
BARANGAY 34	HONG YAN PURIFIED DRINKING WATER		1	561,600.00	2
	MAMA JANEY BAKESHOP- COGON BRANCH		1	1,293,926.40	5
	PERSIMMON FASTFOOD/BAKESHOP CO.		1	1,990,800.00	14
	BAKERY		1	2,340,000.00	8
	CAGAYAN BALITA MARKETING		1	3,113,510.40	0
BARANGAY 35	S.E.F. CONCRETE PRODUCTS		2	525,657.60	3
	NATURE'S TASTE WATER REFILLING		1	974,731.68	3
	MONICO FARM INCORPORATED		2	1,500,000.00	0
	PURIFIED WATER		1	2,372,760.00	6
BARANGAY 37	KAREN'S BAKESHOP		1	250,000.00	0
	JULIE'S BAKESHOP		1	2,061,800.00	9
	COMMONWEALTH FOODS, INC.			57,665,604.45	20
BARANGAY 38	ARBEE'S BAKESHOP		1	-	5
	MARDONEY'S BAKESHOP & FASTFOOD		1		7

CLUP Volume 3 – The Sectoral Studies

				950,000.00	
	MIGHTY L & K FOODS, INC.		1	1,084,108.70	5
	GAISANO CITY		1	4,290,000.00	8
BARANGAY 39	WAFFLE TIME, INC.		1	941,426.48	2
	BAKERY		1	967,200.00	2
	LAMAR BAKESHOP, INC.		1	1,267,500.00	2
	PERSIMMON FASTFOOD AND BAKESHOPPE, CO.		1	1,990,800.00	6
	PERAION CORP.		1	2,156,544.00	7
	MARDONEY'S BAKESHOP & FASTFOOD		1	2,500,000.00	30
	<i>(Not specified, taxpayer UY, RICARDO B.)</i>			8,570,018.60	8
BARANGAY 40	BAKERS TINSMITH AND EQUIPMENT CENTER		2	-	4
	WAFFLE TIME INC. (BRANCH)			506,539.43	3
	MARRON'S MARBLE WORKS		2	530,269.27	4
	CDO PRINT CREATIONS - CORRALES BRANCH		1	1,973,420.10	10
	GOLDISHOES		2	2,531,496.43	14
BAYABAS	JJP BAKESSHOP		1	-	2
	DENIZZIE WATER REFILLING STATION		1	32,000.00	
	BAKERY			120,000.00	2
	BAKERY		1	171,600.00	3
	RHANEN ENTERPRISES			180,000.00	3
	ERIC D. ABADAY WATER REFILLING STATION		1	270,000.00	1
	BALATUKAN ENGINEERING WORKS		2	360,000.00	3
	FURNITURE		1	480,000.00	2
	MIGHTY BREAD BAKESHOPPE		1	620,000.00	0
	VISTA GENERAL MERCHANDISE (VGM)		1	929,500.00	4
BAYANGA	BAKERY		1	-	2

CLUP Volume 3 – The Sectoral Studies

BONBON	(Not specified, taxpayer Miras, Jea Rose Lardizabal)			-	2
	IQUENCH WATER STATION		1	20,250.00	2
	AQUA AIKO WATER REFILLING STATION		1	33,800.00	2
	ELI'S WATER MARKET		1	77,600.90	4
	(Not specified, taxpayer Reyes, Renante Royo)			253,500.00	3
BUGO	MABATANGAN ORGANIC MEATS CORPORATION		2	-	3
	CRISHEIL FOOD PRODUCTS		1	-	5
	ATHIRA BAKESHOP		1	74,000.00	3
	TUNAY'S BAKESHOP		1	80,000.00	2
	CAFE LERIS		1	84,500.00	4
	INDAPAN VARIETY STORE			93,600.00	2
	RYC HOLLOWBLOCK		2	150,000.00	2
	(Not specified, taxpayer Quimbo, Brenda Babor)			169,000.00	3
	MBP HOME FOOD AND REFRESHMENT		1	190,000.00	3
	D' MARTIN'S PARTY NEEDS, CAKES & ACCESSORIES		1	195,000.00	1
	BAKERY		1	199,000.00	2
	ROYAL JADE MACHINERY PHILS. CORP.			200,000.00	3
	(Not specified, taxpayer Jumalon, Maroeta Barrera)			220,000.00	2
	EBB GARMENT MAKING		1	250,000.00	3
	B88 CORPORATION		1	253,500.00	4
	VP NATA FOODS		1	253,500.00	0
	MARIELAS BAKESHOP		1	253,500.00	4
	WONDER FRESH		1	320,000.00	2
	BAKERY		1	338,000.00	8
	LALUCAN BAKESHOPPE		1	344,760.00	0
	(Not specified, taxpayer Baja, Gloria Justiniane)		1		2

CLUP Volume 3 – The Sectoral Studies

				400,302.10	
	MJ FOODS		1	420,000.00	5
	EL JIREH BAKESHOPPE & SNACK INN		1	507,000.00	3
	AQUA PEARL WATER REFILLING STATION		1	527,280.00	3
	ELICEL FOODS		1	530,816.83	5
	AQUA SPRINGS PURIFIED DRINKING WATER		1	546,000.00	3
	CARL JAMES ENTERPRISES		1	613,267.20	2
	ISC NATA DE COCO DISTRIBUTOR		1	630,789.12	6
	BAKERY		1	700,000.00	3
	FOOD PRODUCTS		1	700,000.00	5
	ST. BENEDICT FOOD PRODUCTS		1	700,000.00	5
	SOUTHERN YUI FARM, INC.		2	835,244.39	2
	PURIFIED WATER		1	878,800.00	6
	BAKERY		1	971,755.20	2
	SHANGHAI BISCUIT FACTORY		1	3,650,400.00	4
BULUA	JACOB'S SPRING PURIFIED WATER STATION		1	-	2
	ANNIE'S PROCESSED MEAT PRODUCTS		1	10,000.00	0
	BAKERY		1	23,400.00	1
	BAKERY			52,000.00	70
	MOKEKKOY BREADS AND PASTRIES		1	80,000.00	4
	<i>(Not specified, taxpayer Tan, Aylin Magdua)</i>			80,000.00	1
	YNT ENTERPRISES			80,000.00	2
	TOP WATER REFILLING STATION		1	104,000.00	2
	IYDESSON ENTERPRISES			123,552.00	0
	CONCRETE PRODUCTS			150,000.00	4
	<i>(Not specified, taxpayer Luardo, Danilo C.)</i>			171,600.00	4

CLUP Volume 3 – The Sectoral Studies

	<i>(Not specified, taxpayer Arias, Floreben Montebon)</i>			180,000.00	1
	SHANE FE BAKESHOP		1	200,000.00	2
	FOOD PRODUCTS		1	234,000.00	0
	JEEL'S MASAGANA FARM SUPPLY, INC.		1	450,000.00	3
	PURIFIED WATER		1	561,600.00	4
	PURIFIED WATER		1	585,000.00	2
	BAKERY		1	593,049.60	5
	5R PARREL COMMERCIAL		1	695,000.00	0
	EB CERAMICS		1	749,999.00	3
	ARBEE'S BAKESHOP		1	750,000.00	4
	IT'S PURE!PURIFIED DRINKING WATER/REFILLING STN		1	842,400.00	3
	D' PIE MAN CAKES & PASTRIES		1	910,000.00	3
	<i>(Not specified, taxpayer Bernales, Allan Noel Sambaan)</i>		1	962,000.00	5
	HONEY LEAF BAKESHOP		1	1,002,000.00	10
	TAHANAN BREADHOUSE		1	1,200,000.00	4
	MSBR NATA DE COCO MAKING		1	1,213,056.00	0
	RAIN SWEET PURIFIED DRINKING WATER		1	1,250,000.00	3
	CCPC DISTRIBUTOR, INC.		1	1,346,800.00	8
	ALL PRECISION CARTRIDGE INC.		2	1,480,000.00	3
	PADLA'S HOMEMADE PRODUCTS		1	2,112,500.00	4
	THE STONEWARE POTTERY, INC.		1	2,500,000.00	5
	VJANDEP BAKESHOP & REFRESHMENT(PASTEL OF CAMIGUIN)		1	7,207,200.00	104
	PMFTC INC		2	1,765,447,336.69	6
CAMAMAN-AN	MIKAY'S BREAD		1	30,000.00	1
	WATER 'EMS STATION		1	54,730.00	2
	TRI-MAE BAKESHOPPE		1		0

CLUP Volume 3 – The Sectoral Studies

				72,000.00	
	TRI-VALUE PURIFIED WATER		1	90,000.00	3
	BAKERY		1	104,000.00	0
	AQUA CLOUD WATER REFILLING STATION		1	117,000.00	3
	VIKINGS MANUFACTURING			150,020.00	5
	FOOD PRODUCTS		1	156,000.00	2
	SEVEN A ALKA-IONIZED WATER		1	180,000.00	2
	<i>(Not specified, taxpayer Dato, Nito P)</i>			220,000.00	0
	JULIE'S BAKESHOP		1	300,000.00	4
	ASSEMBLER		2	338,000.00	5
	P AND R WOOD CRAFT		1	360,000.00	3
	RFJ BAKESHOPPE		1	365,040.00	3
	B'GALS TRADING		1	365,040.00	5
	YMC FOOD PRODUCTS		1	550,000.00	10
	BAKERY		1	584,064.00	5
	TASTER'S CHOICE WATER REFILLING STATION		1	910,000.00	4
	BAKERY		1	1,077,000.00	4
	CARMEL'S POPSICLE		1	1,293,926.40	5
	SAFE VUE AUTO GLASS ENTERPRISES		1	2,990,900.00	0
	NEW DE ORO YEKHING MIKI FACTORY		2	4,200,000.00	7
	MINDANAO GOLDEN "K" FARMS INCORPORATED		2	10,085,960.00	3
CANITOAN	<i>(Not specified, taxpayer Bernales, Melodina Edrolin)</i>		1	-	2
	NRC CONCRETE SUPPLIES		1	-	3
	HOOT'S TASTY PASTRIES CO.		1	-	2
	ANGEL PUSH WATER STATION		1	30,000.00	2
	TOTO CONCRETE PRODUCTS		2	50,000.00	1

CLUP Volume 3 – The Sectoral Studies

	CONCRETE		2	78,000.00	0
	MUSHO PURIFIED DRINKING WATER		1	78,000.00	4
	<i>(Not specified, taxpayer Edrolin, May N.)</i>			84,500.00	3
	CONCRETE		2	90,246.00	4
	BAKERY		1	93,600.00	2
	D'PIE MAN CAKES & PASTRIES		1	150,966.00	4
	TEENDRYMIE CONCRETE PRODUCTS STORE		2	156,000.00	2
	CONCRETE			174,720.00	2
	CONCRETE PRODUCTS		2	200,000.00	5
	DEKTGV GENERAL MERCHANDISE		1	242,611.20	3
	KINGS DELICATESSEN AND BAKERY		1	253,500.00	1
	CHAR & LENE HOLLOWBLOCKS & SARI-SARI STORE		2	253,500.00	4
	K1 ENTERPRISES		1	308,880.00	2
	CANDLE MAKING		2	336,960.00	4
	MINDANAO PRECAST STRUCTURES INC.		2	390,000.00	7
	REJEE'S BREAD AVENUE		1	450,000.00	2
	L & B CONCRETE PRODUCTS		2	507,000.00	0
	PANADERIA SA CANITOAN		1	600,000.00	7
	ACB ENTERPRISES		1	750,000.00	4
	F & M'S BAKESHOP		1	1,123,200.00	5
	FOOD PRODUCTS		1	1,213,056.00	4
CARMEN	BUMBLEBEE PURIFIED DRINKING WATER		1	-	1
	BAKERY		1	-	2
	VINEDROPS PURIFIED DRINKING WATER		1	-	2
	WATER SPOUT PURIFIED DRINKING WATER		1	-	2
	SBR FURNITURE		1		2

CLUP Volume 3 – The Sectoral Studies

				30,000.00	
	PURIFIED WATER		1	30,000.00	2
	BAKERY		1	33,800.00	2
	CHRIS SAM SURE WATER REFILLING STATION		1	33,800.00	1
	<i>(Not specified, taxpayer Caseres, Jocelyn O.)</i>			84,500.00	1
	BAKERY		1	89,856.00	3
	CONCRETE		2	90,000.00	2
	TAMTAM & JIGGY'S ENTERPRISE		1	91,000.00	2
	BAKERY			93,600.00	2
	WOODHAVEN CRAFT		2	117,000.00	2
	ARBEE'S BAKESHOP		1	125,000.00	5
	CARMEN TINSMITH		1	165,360.00	3
	JV DATU WATER REFILLING STATION		1	169,000.00	2
	DEL CLEAR PURIFIED DRINKING WATER		1	169,000.00	2
	TWINKLE FURNITURE TRADING		2	185,900.00	1
	SWIRLZ CAKES, CUPCAKES & BARS		1	187,200.00	0
	GOOD MORNING PURIFIED AND MINERAL WATER		1	199,999.00	2
	NEW LEAF BAKESHOP		1	253,500.00	3
	AGOHO FURNITURE		2	253,500.00	0
	SUSAN'S HOMEMADE FOODSTUFFS		1	265,100.00	2
	ANN & LYN BAKESHOP		1	300,000.00	4
	ORO BLINDS AND CURTAINS GALLERY		1	325,000.00	5
	BAKERY		1	330,000.00	2
	<i>(Not specified, taxpayer Taboclaon, Jason Y.)</i>		1	338,000.00	1
	BAKERY		1	340,704.00	4
	STELLA'S BREAD BASKET		1	365,000.00	3

CLUP Volume 3 – The Sectoral Studies

	TAGOLOAN FOODS, INC.		1	377,000.00	5
	EL ROI ENTERPRISE		1	383,500.00	4
	ARBEE'S BAKESHOP		1	450,000.00	5
	LIME SPRING PURIFIED DRINKING WATER		1	507,000.00	2
	WATER SPILLS PURIFIED DRINKING WATER		1	507,000.00	2
	LIME SPRING PURIFIED DRINKING WATER		1	520,000.00	0
	TAGOLOAN FOODS, INC.		1	550,000.00	6
	PURIFIED WATER		1	643,570.00	3
	RIC COCO LUMBER & STICK DEALER		1	700,000.00	7
	KAREN'S BAKESHOP		1	845,000.00	4
	ERICK BAKESHOP		1	936,000.00	2
	MADELICIOUS BAKE SHOP		1	1,500,000.00	6
	MICHAEL ANN BAKESHOP		1	1,600,000.00	6
	SOFT N CLEAN PURIFIED DRINKING WATER		1	1,800,000.00	4
	ORO HARRCEL TRADING INC.		1	2,199,600.00	4
	KINAWA AGRI BUSINESS, INC.		2	2,277,849.60	10
	ROLOR BLUESKY CORPORATION		1	2,460,077.57	3
	GAISANO SUPERSTORE		1	3,102,208.20	5
	FELANTHIA SOAP INDUSTRIES		2	3,380,000.00	4
	TROPIC FOOD CORPORATION		1	4,247,100.00	10
	NEW LEAF BAKESHOP		1	4,290,000.00	12
	BUSCO SUGAR MILLING CO., INC.		2	5,234,157.50	0
	JAYBUILDERS' INDUSTRIES INC.		2	7,150,000.00	0
	AJINOMOTO PHILS CORP,		3	104,465,493.33	14
CONSOLACION	BAKERY		1	-	0
	BUILTECH SOLUTIONS		2		2

CLUP Volume 3 – The Sectoral Studies

				60,450.00	
	FRUITY POP FOOD PRODUCTS		1	1,014,000.00	7
	ALLGEMEINE-BAU-CHEMIE PHIL., INC.		3	9,864,000.00	4
	PMFTC INC			505,094,734.95	4
CUGMAN	JAM BAKESHOPPE AND CATERING SERVICES		1	-	6
	VIVIN ENTERPRISES			33,800.00	4
	WRS AQUA TRADE PURIFIED DRINKING WATER		1	80,000.00	2
	WATER SPILLS PURIFIED DRINKING WATER		1	150,000.00	2
	MMA AGRI PRODUCTS		1	169,000.00	2
	DURUM CORPORATION		1	325,000.00	4
	BAKERY		1	360,000.00	2
	PROSPERITY MARKETING & GENERAL MERCHANDISE		1	500,000.00	3
	JBS SAND AND GRAVEL AND HOLLOWBLOCKS MAKING		1	558,417.60	3
	BAKERY		1	608,400.00	1
	PEARL SOFT PURIFIED DRINKING WATER		1	876,096.00	0
	NEW HOPE FLOUR MILLING CORPORATION			1,000,000.00	15
	MIGHTY L & K FOODS, INC.		1	1,084,106.70	4
	MALASAG RESORT CORP.		1	1,170,000.00	3
	PHIL. SPRING WATER RESOURCE, INC.		1	1,364,756.79	0
	HAPPY STAR FOOD MANUFACTURING & MARKETING CORP.		1	2,197,000.00	0
	E. PELAEZ RANCH, INC.		2	3,434,296.32	0
	PHIL. SPRING WATER RESOURCE, INC.		1	6,139,341.81	0
	PLATINUM FOOD PRODUCTS		1	6,217,146.00	6
	CDO ICE PLANT INC.		1	10,660,000.00	0
	KSK FOOD PRODUCTS		1	10,817,855.87	30
	RED RIBBON BAKESHOP, INC.		1	21,635,616.72	43

CLUP Volume 3 – The Sectoral Studies

	PHIL.SPRING WATER RESOURCE .,INC.		1	23,793,534.84	174
	LIWAYWAY MARKETING CORPORATION		1	67,438,720.07	62
	MANDAUE FOAM INDUSTRIES, INC.		3	71,253,345.31	75
	NORTH MINDANAO STEEL CORP.		3	88,281,223.65	29
	FIRST INDUSTRIAL PLASTIC VENTURES, INC.			95,000,000.00	247
	UNION GALVASTEEL CORPORATION		3	96,696,806.33	15
DANSOLIHON	BAKERY			75,000.00	1
GUSA	FURNITURE		1	-	1
	MESSIAS CORPORATION		2	-	2
	<i>(Not specified, taxpayer Mutosco, Jasmen Galarrita)</i>			-	2
	KANDEE ENTERPRISE		1	45,000.00	2
	BAKERY			84,240.00	5
	<i>(Not specified, taxpayer Jala, Vicenta Mugot)</i>			107,827.20	3
	TRICHIE FAYE BAKESHOP			110,000.00	3
	COR-BEN BAKESHOP		1	253,500.00	4
	SILVANO RUBBER & DIESEL PARTS		2	325,000.00	5
	AQUA FONTANELLA PURIFIED DRINKING WATER		1	420,830.00	2
	F & J BAKERY		1	450,000.00	6
	UMALAG FARMS , INCORPORATED		1	591,500.00	14
	<i>(Not specified, taxpayer Zayas, Austin Eduarte)</i>		1	591,500.00	4
	A & P ENTERPRISE		1	914,765.90	0
	FURNITURE		1	990,000.00	5
	DE ORO LIGHTS & SCENT SHOP		1	1,024,358.40	3
	GUSA GOLDEN BELLS BAKESHOP		1	1,078,272.00	5
	FL PROCESS DESIGN & TECHNOLOGY CO.		1	1,173,950.00	6
	LAMAR BAKESHOP, INC.		1		3

CLUP Volume 3 – The Sectoral Studies

				1,238,172.43	
	SO FINE WATER SUPPLY		1	1,293,500.00	3
	CAGAYAN COLD POINT & FOODS CORP.		1	1,341,665.00	6
	SUNNY FARM FOODS		1	1,750,000.00	4
	STARWOOD FURNITURE		1	3,470,391.48	14
	JICA ICE PLANT		1	4,700,000.00	15
	NEVIN & COMPANY, INC.			9,326,317.00	0
	HERCULES FOAM MINDANAO, INC.		3	10,500,000.00	8
	DUNKIN DONUTS			16,500,000.00	0
	PHIL. PHARMAWEALTH, INC.		2	43,250,203.10	5
	UNITED LABORATORIES, INC.		1	401,002,805.46	10
	PANASONIC MANUFACTURING PHILS.CORP.			406,903,671.82	6
	SAN MIGUEL FOODS., INC.		2	1,089,618,500.00	30
INDAHAG	CONCRETE		2	169,000.00	3
	ADATCHE PURE WATER CORP.		1	630,789.12	3
IPONAN	BAKERY		1	-	2
	EMM'S AQUA WATER REFILLING STATION		1	-	3
	WATER ELY REFILLING STATION		1	-	3
	ANABELLE'S BAKESHOP		1	-	1
	RMB WATERKO WATER REFILLING STATION		1	10,000.00	2
	MARICRIS REFRESH ENTERPRISES		1	48,000.00	2
	POTS-STEP BAKESHOP		1	60,000.00	3
	WATER WORLD REFILLING STATION		1	84,500.00	1
	SOW'S DELICACIES		1	93,600.00	0
	LIME SPRING PURIFIED DRINKING WATER		1	95,000.00	1
	AJ AQUA PURIFIED DRINKING WATER		1	100,000.00	5

CLUP Volume 3 – The Sectoral Studies

	AJ TRADING & CONCRETE PRODUCTS		2	104,000.00	2
	JACKY BAKESHOPPE		1	117,000.00	1
	LITEBOX CREATIVE SERVICES CO.		1	120,000.00	2
	FU DA TRADING		1	120,160.00	3
	CLAIRE STREAM PURIFIED DRINKING WATER		1	168,480.00	4
	MSCDO WATER REFILLING STATION		1	180,000.00	4
	DENISE DELICACIES		1	234,000.00	7
	<i>(Not specified, taxpayer Precillas, Maboname O.)</i>			253,500.00	3
	GELI FOODS		1	300,000.00	4
	RC & KENT GENERAL MERCHANDISE		2	320,000.00	3
	FONTUS PURE WATER REFILLING STATION		1	325,000.00	2
	CONCRETE		2	365,040.00	0
	ASSEMBLER		1	377,000.00	3
	ARBEE'S BAKESHOP		1	533,000.00	5
	EDWOCK'S BAKESHOPPE		1	540,800.00	5
	AGAN'S FURNITURE		1	591,500.00	5
	JR SPRING PURIFIED DRINKING WATER		1	630,789.12	3
	SAARENAS ENTERPRISES		1	650,000.00	0
	L. PINEDA WOODCRAFT		1	1,575,000.00	5
	PRIMESNACK FOOD CORP.		1	16,001,357.16	100
KAUSWAGAN	KINGBEE INNOVE CORP.		2	-	10
	BLUE KRYZTAL FROST WATER REFILLING STATION		1	-	2
	HAAN'Z FOODS		1	18,564.65	2
	CANE BAKESHOP		1	40,000.00	3
	LAMAR BAKESHOP, INC.		1	50,000.00	2
	AWI'S CAKEISTRY		1		0

CLUP Volume 3 – The Sectoral Studies

				60,000.00	
	BETHLEHEM ALTAR BREAD		1	65,000.00	
	MIGGY WATER REFILLING STATION		1	104,000.00	2
	SASHIE STORE AND BAKERY		1	112,320.00	0
	SHIRTACTICS GARMENTS		1	126,750.00	5
	BLUEHOLE ENTERPRISES		1	130,000.00	1
	HEAVEN'S COOL WATER		1	163,800.00	2
	DAVE'S BEANERY CAFE		1	250,000.00	0
	HEAVEN'S SWEET DROPS WATER REFILLING STATION		1	252,200.00	4
	FURNITURE			325,000.00	2
	SOLAR BRAUN UNI-SHIRT		1	338,000.00	5
	BAKERY		1	338,000.00	3
	WELLNESS CLEAR PURIFIED DRINKING WATER		1	389,350.00	3
	AQUA BOY WATER REFILLING STATION		1	535,392.00	1
	HELEN'S CANDY & PASTRIES		1	540,000.00	8
	SO FINE WATER SUPPLY		1	808,704.00	3
	CARDEÑO REPACKING		1	838,656.00	5
	HOME BAKER BAKESHOP		1	876,096.00	2
	<i>(Not specified, taxpayer Mercadal, Ernie F.)</i>		2	1,024,358.40	0
	<i>(Not specified, taxpayer Amene, Edwin P.)</i>			1,024,358.40	5
	WAFFLE TIME, INC.		1	1,123,200.00	2
	KAREN'S BAKESHOP		1	1,248,000.00	2
	BAKERY		1	1,500,000.00	3
	ERS SURPLUS VENTURES		1	1,650,000.00	4
	MN BAKESHOPPE		1	1,900,000.00	10
	PERSIMMON FASTFOOD & BAKESHOPPE, CO.		1	2,999,800.00	9

CLUP Volume 3 – The Sectoral Studies

	SR. PEDRO		1	3,088,800.00	6
	OLIVER INDUSTRIAL PRODUCTS		1	6,451,169.35	5
	ARBEE'S BAKESHOP		1	8,022,389.55	5
	GOLDILOCKS		1	19,121,777.09	8
	LINDE PHILIPPINES (SOUTH), INC.			97,877,634.10	9
	ACS MANUFACTURING CORPORATION			146,000,000.00	20
LAPASAN	FELIZ BAKESHOP		1	-	2
	<i>(Not specified, taxpayer Inson, Leizel Simpas)</i>			-	1
	<i>(Not specified, taxpayer Uy, Amor Sarsaba)</i>			-	2
	R AND A BUDGET MEALS AND BAKESHOP		1	23,400.00	4
	PURIFIED WATER		1	33,800.00	2
	FURNITURE			58,500.00	2
	WAFFLE TIME, INC.		1	61,011.00	2
	ATHIRA BAKESHOP		1	74,000.00	3
	<i>(Not specified, taxpayer Sagocsoc, Editha Roble)</i>			93,600.00	3
	MOTHER EARTH WATER REFILLING STATION		1	169,000.00	2
	NEW CDO KWIKWAY MACHINE WORKS, INC.			169,000.00	6
	MARY'S PURIFIED WATER		1	187,200.00	3
	RAYNE'S BAKERY		1	240,000.00	2
	ANGEL LEIGH SWEET PURIFIED DRINKING WATER		1	250,000.00	3
	RCR WOODCRAFT		2	253,500.00	4
	ANGEL LEIGH SWEET PURIFIED DRINKING WATER		1	260,000.00	2
	L.A. BAKESHOPPE		1	300,000.00	3
	HEAVEN'S PURE AQUA PURIFIED DRINKING WATER		1	300,000.00	0
	BAKERY		1	336,960.00	2
	MAMA JANEY BAKESHOP		1		2

CLUP Volume 3 – The Sectoral Studies

				338,000.00	
	KAREN'S BAKESHOP		1	365,000.00	2
	MARIELAS BAKESHOP		1	561,600.00	3
	RJ SPICE MARKETING		1	633,952.80	1
	FOOD PRODUCTS		1	750,000.00	2
	WAFFLE TIME, INC.		1	755,212.16	2
	WAFFLE TIME, INC.		1	776,857.26	2
	BAKERY		1	845,000.00	8
	DE ORO TRAPAL AND TENTS CENTER		2	900,432.00	3
	WAFFLE TIME, INC.		1	938,572.50	2
	BAKERY		1	998,000.00	5
	MIGHTY L & K FOODS, INC.		1	1,734,570.72	3
	A.S. SEVILLA IRON WORKS		2	1,900,000.00	6
	MADELICIOUS BAKE SHOP		1	2,150,000.00	4
	<i>FURNITURE (Maureal, Zenny L.)</i>		1	2,190,240.00	6
	MAMA JANEY BAKESHOP		1	3,650,400.00	5
	DON MIGUEL BAKESHOPPE		1	4,282,492.50	12
	RED RIBBON BAKESHOP, INC.		1	4,679,903.01	0
	FURNITURE		1	5,200,000.00	19
	CALDA PIZZA		1	7,722,000.00	9
	RED RIBBON BAKESHOPPE, INC.		1	8,454,000.00	12
	ALLISON MOTORS CORP.		1	17,950,000.00	0
	SHARP (PHILIPPINES) CORPORATION			93,041,638.00	11
LUMBIA	BEST AGRI-PRODUCTS PROCESSING COOPERATIVE		1	-	5
	GOLDBEE'S BAKESHOPPE		1	-	4
	MARIDEL'S BAKESHOP		1	-	2

CLUP Volume 3 – The Sectoral Studies

	PAYLA FARM		2	100,000.00	7
	BAKERY		1	194,088.96	3
MACABALAN	MMS BLUEWATER RESOURCES		1	-	2
	RIGHT PURE WATER REFILLING STATION		1	33,800.00	2
	FINE DROPS WATER REFILLING STATION		1	78,000.00	2
	JPAG'S GLASS & ALUMINUM BOXES MAKERS		2	104,000.00	2
	BESS AND TWIN STAR WATER REFILLING STATION		1	118,916.00	1
	BAKERY		1	180,000.00	2
	<i>(Not specified, taxpayer Flores, Gerald C.)</i>			200,000.00	0
	ANGEL LEIGH SWEET PURIFIED DRINKING WATER		1	234,000.00	1
	WATER JADE PURIFIED DRINKING WATER		1	338,000.00	6
	BAKERY		1	588,120.00	3
	BAKERY		1	600,000.00	0
	<i>(Not specified, taxpayer Sedayon, Mercedes C.)</i>		1	943,488.00	4
	IRINA'S BAKESHOPPE & CONVENIENCE STORE		1	1,048,320.00	0
	ATLAS FERTILIZER CORPORATION		2	971,736,600.00	6
MACASANDIG	ALTAB ENTERPRISES		1	-	2
	3 SISTER'S METAL CRAFT		2	-	1
	SANDREYA BREADS AND PASTRIES		1	-	6
	<i>(Not specified, taxpayer Luardo, Danilo C.)</i>			-	2
	ARBEE'S BAKESHOP		1	-	5
	GN ENTERPRISES		1	-	4
	ANTON MEATSHOP		1	16,900.00	0
	SUGAR BASKET CAKES & PASTRIES		1	52,000.00	1
	MACASANDIG WOMEN'S ORGANIZATION (BWDC) INC.		1	65,000.00	
	FOOD PRODUCTS				1

CLUP Volume 3 – The Sectoral Studies

				72,000.00	
	BAKERY		1	84,500.00	2
	TAMMER PURIFIED DRINKING WATER		1	84,500.00	2
	<i>(Not specified, taxpayer Aquino, Alfredo M.)</i>			85,000.00	3
	GNR PORK CHICHARON & MEAT PROCESSING		1	100,000.00	2
	BREADSNEST BAKESHOP		1	104,000.00	0
	MITCHIE'S HOMEBAKED PRODUCTS		1	105,056.64	2
	<i>(Not specified, taxpayer Panoy, Evangeline Que-e)</i>			109,200.00	2
	CHINITA'S BAKESHOP			120,000.00	4
	CONCRETE PRODUCTS		2	150,000.00	3
	MY NURSE'S STATION PURIFIED WATER		1	150,000.00	2
	<i>(Not specified, taxpayer Paayas, Guadalupe O.)</i>			161,740.80	3
	<i>(Not specified, taxpayer Contreras, Chevy Erali C.)</i>			167,076.00	4
	BAKERY		1	169,000.00	2
	<i>(Not specified, taxpayer Medalla, Lucia Ormillada)</i>			182,520.00	4
	FOOD PRODUCTS		1	187,200.00	3
	ADATCHE PURE WATER CORPORATION		1	234,000.00	4
	TS WELLNESS WATER		1	247,000.00	2
	BAKERY		1	250,000.00	2
	PINOY SNACKLINES		1	350,000.00	8
	<i>(Not specified, taxpayer Tumang, Jose Mari Luis)</i>		1	365,040.00	3
	MICHAEL ANN BAKESHOP		1	392,995.85	0
	CARLO HOLLOWBLOCKS MAKING		1	754,790.40	0
	FOOD PRODUCTS		1	808,704.00	2
	AGC VENTURES			822,064.00	21
	DARLING FOOD PRODUCT		1	850,000.00	0

CLUP Volume 3 – The Sectoral Studies

	EBRM ENTERPRISE		1	2,300,000.00	3
	RONVEGO ENTERPRISES		2	2,400,000.00	3
	CIELO'S GENERAL MERCHANDISE & FOOD PROCESSING		1	3,102,000.00	12
	<i>BAKERY (taxpayer Salahid, Conchita M.)</i>		1	3,420,331.20	0
	MICHAEL ANN BAKESHOP		1	3,650,400.00	7
	LIM SENG BEN VERMICILI FACTORY		1	4,000,000.00	8
	TGO FOODS		1	4,202,137.37	4
	CRYSTAL LAKE FOOD INDUSTRIES		1	12,408,154.33	40
	MODTRADE T-SHIRT CAMPUS		1	26,484,365.00	60
MAMBUAYA	BAKERY			126,952.80	2
	PERFECT WORLD METAL MINING CORP.		1	12,320,979.49	63
MKT-AGORA	BAKERY		1	240,000.00	0
	D' PIE MAN CAKES & PASTRIES		1	446,037.80	4
	BAKERY		1	720,000.00	0
	CERES PASALUBONG INCORPORATED		1	1,080,000.00	1
MKT-BULUA	<i>(Not specified, taxpayer Juario, Brigitte D.)</i>			180,000.00	1
MKT-CARMEN	<i>(Not specified, taxpayer Macas, Emma)</i>		1	404,352.00	1
MKT-COGON	<i>(Not specified, taxpayer Arquisola, Dana Rae)</i>			-	2
	BAKERY		1	-	0
	<i>(Not specified, taxpayer Firmacion, Stella B.)</i>			180,000.00	1
	<i>(Not specified, taxpayer Guayno, Freda)</i>		1	480,000.00	1
	<i>(Not specified, taxpayer Diarai, Jeffrey A.)</i>			1,020,000.00	1
	<i>(Not specified, taxpayer Arquisola, Charisse Canares)</i>		1	1,684,800.00	2
MKT-PUERTO	<i>(Not specified, taxpayer Arsolon, Ranulfo D.)</i>		1	125,000.00	0
NAZARETH	SHANGLAM BAKERY		1	-	3
	PANE E DOCI CO.				1

CLUP Volume 3 – The Sectoral Studies

				-	
	MAC ALKASOLUTION NATURAL ALKALINE DRINKING WATER		1	7,140.00	3
	BAKERY			84,500.00	1
	HEALTHY WATER ENTERPRISES		1	104,000.00	2
	HEALTHY DRINK PURIFIED DRINKING WATER		1	135,291.00	0
	WYNN'S ZESTY SNACKS AND CATERING SERVICES		1	315,000.00	0
	PURIFIED WATER		1	338,000.00	4
	WATER PEARL PURIFIED DRINKING WATER		1	374,400.00	2
	THE BREAD HUB		1	450,000.00	5
	JUNCHING WATER REFILLING STATION		1	450,000.00	4
	<i>(Not specified, taxpayer Go, Rene Ong)</i>		1	499,999.00	12
	SHANGLAM BAKERY		1	850,000.00	5
	PURIFIED WATER		1	879,040.66	4
	ST. COOL PURIFIED WATER		1	912,600.00	4
	ASC VENTURES		1	1,500,000.00	3
	CHRISTINE'S SOY SAUCE CORPORATION		1	2,560,896.00	5
	AQUASWEET PURIFIED DRINKING WATER		1	4,927,500.00	10
PAGATPAT	F & M'S BAKESHOP		1	-	2
	RONALD CONCRETE PRODUCTS		2	-	0
	JC HOLLOW BLOCK FACTORY		2	25,000.00	2
	CUADRO ONSE FARM		1	30,000.00	
	TETEL FARM		2	30,000.00	2
	CLERIC ENTERPRISES		2	32,700.00	3
	SUPERBLOCK VACALARES CONCRETE PRODUCTS		2	50,000.00	6
	AUGUSTINE CONCRETE PRODUCTS		1	84,500.00	2
	VACALARES' SAND, GRAVEL & CONCRETE HOLLOWBLOCKS		1	84,500.00	2

CLUP Volume 3 – The Sectoral Studies

	TAY BOY HOLLOW BLOCK		2	95,757.00	2
PATAG	LOLA FINAS HOMEMADE PRODUCTS		1	-	1
	AQUA PISCES WATER REFILLING STATION		1	5,293.33	2
	LA DOÑA ESPAÑOL SARDINES		1	48,000.00	2
	BAKERY			52,000.00	0
	TPG MARKETING & INDUSTRIAL CORP.			99,990.00	2
	CRUMBS SNACK INN AND BAKERY		1	150,000.00	4
	BAKERY		1	350,000.00	0
	JOHNIEL BAKESHOPPE		1	365,040.00	3
	PURIFIED WATER		1	561,600.00	6
	AQUA TIERA PURIFIED DRINKING WATER		1	881,206.56	5
	MICHAEL ANN BAKESHOP		1	1,750,000.00	5
	HUGE PURIFIED DRINKING WATER		1	2,467,986.77	5
	RAINSOFT PURIFIED DRINKING WATER		1	3,650,400.00	23
PUERTO	GREENHERON STONE CUTTERS		2	-	8
	BAKERY		1	84,500.00	0
	VIDA DE ORO PURIFIED WATER		1	101,400.00	3
	MY ONLY WAY (MOWI) INC.		2	151,798.00	0
	SAN ISIDRO LABRADOR STONE CRAFT		2	169,000.00	5
	FURNITURE			200,000.00	2
	SUNDO AGRICULTURAL SUPPLY		1	338,000.00	1
	MOREH BAKESHOP		1	350,000.00	3
	BAKERY		1	643,500.00	10
	BAKERY		1	740,000.00	5
	BBAKERY		1	950,000.00	5
	SUNDO POULTRY BROILER FARM		2		1

CLUP Volume 3 – The Sectoral Studies

				1,000,000.00	
	MIGHTY L & K FOODS, INC.		1	1,084,106.70	0
	AQUA SOFT REFILLING STATION		1	1,200,000.00	6
	DURUM CORPORATION		1	2,433,600.00	6
	CDO ZEPH CORPORATION		1	2,750,155.60	3
	BAKERY		1	3,737,448.00	6
	RAMS SUPERBLOCK ENTERPRISES		2	3,854,822.40	5
	ORO B & W PLANT & COLD STORAGE		1	4,999,990.00	12
	SHANGHAI BISCUIT FACTORY		1	6,280,989.00	6
	PRONATURAL FEED COROPORATION		1	17,607,712.23	30
PUNTOD	CHINOS DELI		1	-	1
	RIGHT PURE WATER REFILLING STATION		1	123,552.00	2
	BAKERY			150,000.00	2
	PURIFIED WATER		1	168,400.00	0
	BAKERY		1	243,000.00	2
	BAKERY		1	593,049.60	3
	ORIENTAL DEW PURIFIED DRINKING WATER		1	811,200.00	5
	HE & SONS MARKETING		1	3,397,680.00	5
	PRETTY DOOR INTERNATIONAL CORPORATION		1	4,290,000.00	10
	LIMKETKAI MANUFACTURING CORPORATION			823,867,762.13	100
TABLON	MJ'S PURE WATER REFILLING		1	70,000.00	2
	WRS AGUA TRADE		1	110,000.00	3
	GOLDEN SEASONS FOOD PRODUCTS		1	199,999.00	3
	C. GARCES BOXES MAKING		1	377,395.20	5
	E.I.E. MACHINE & HARDWARE		1	765,573.12	3
	BAKERY		1	780,000.00	13

CLUP Volume 3 – The Sectoral Studies

	B.R. CHUA ENTERPRISES INC.		1	826,800.00	4
	CARPENTERSVILLE WOOD SHOP, INC.		1	921,481.00	0
	DAESANG RICOR CORPORATION			2,000,000.00	5
	WELLA METAL CORPORATION		1	2,500,000.00	5
	<i>(Not specified, taxpayer Hernani, Marilou I.)</i>			3,504,384.00	8
	BOUNTY FRESH FOOD INC.		2	5,449,034.99	14
	CHEMICAL ALLOY CORPORATION		2	6,463,916.32	4
	S & C VENTURES CORPORATION		2	7,100,000.00	3
	GRANITE INDUSTRIAL CORP.		2	8,000,000.00	9
	KRISPY FOODS, INC.		1	8,400,000.00	6
	GRANEXPORT MANUFACTURING CORPORATION			11,419,980.00	23
	FIRST ASIAN METALS CORPORATION			17,885,140.68	67
	SALEM-OCEANIC INDUSTRIES CORP.			29,851,200.00	34
	DEAR MANOK		1	38,040,354.70	25
	RICOR MILLS CORPORATION		2	39,969,930.00	0
	CAG. DE ORO ROYAL DAICHI FOOD CORP.		1	50,646,561.87	300
	CAGAYAN CORN PRODUCTS CORP.		2	55,055,000.00	50
	TECHNO-STRESS SYSTEMS CORP.		3	78,000,000.00	27
	GOLDILOCKS		1	149,948,996.87	0
	EMPERADOR DISTILLERS, INC.		2	151,976,689.16	26
	VITARICH CORPORATION		2	212,644,698.61	11
	CAGAYAN DE ORO OIL CO. INC.,		2	632,624,061.30	26
	SAN MIGUEL FOODS, INC.		3	1,998,131,970.62	50
	NESTLE PHILS., INC.		2	7,027,620,679.00	828
TAGPANGI	ABRILLO FURNITURE, INC.		1	-	40
	LONDON FARM		2		2

CLUP Volume 3 – The Sectoral Studies

				371,800.00	
TIGNAPOLOAN	POULTRY		2	1,036,800.00	2

Source: City Treasurer's Office

Commerce and Trade

Annex Table 20
HISTORICAL DATA ON COMMERCIAL AREAS, 2009-2013
Cagayan de Oro City

Location	Commercial Areas (in hectares)				
	2009	2010	2011	2012	2013
District 1					
Baikingon	-	0.191200	-	-	-
Balulang	-	-	0.259100	0.259100	0.450300
Bayabas	-	-	1.003900	1.003900	1.003900
Bayanga	-	-	-	-	-
Besigan	-	-	-	-	-
Bonbon	0.800900	0.800900	0.800900	0.800900	0.800900
Bulua	6.122300	6.368600	6.368600	11.939800	11.939800
Canitoan	-	-	-	0.300000	0.300000
Carmen	24.980691	26.316061	26.316061	26.316061	26.316061
Dansolihon	-	-	-	-	-
Iponan	0.556000	0.563500	0.563500	0.585080	0.585080
Kauswagan	21.699210	23.540020	23.640020	23.540020	22.985724
Lumbia	-	8.705500	8.705500	1.252600	1.252600
Mambuaya	-	-	-	-	-
Pagalungan	-	-	-	-	-
Pagatpat	-	12.255000	12.255000	1.000000	1.000000
Patag	.070000	0.669900	0.557450	1.655000	1.655000
Pigsag-an	-	-	-	-	-
San Simon	-	-	-	-	-
Taglimao	-	-	-	-	-
Tagpangi	-	-	-	-	-
Tignapoloan	-	-	-	-	-
Tuburan	-	-	-	-	-
Tumpagon	-	-	-	-	-
Sub-Total	54.2291010	79.410681	80.470031	68.652461	68.289365
District 2	-	-	-	-	-
Agusan	2.828657	3.894800	4.016200	4.016200	5.201900
Balubal	-	-	-	-	-
Bugo	0.165950	0.204150	0.212650	0.777250	0.777250
Camaman-an	5.625550	6.512500	4.897100	6.597550	6.597550
Consolacion	1.836220	1.777870	1.694750	0.611636	0.611636
Cugman	7.149175	7.149175	8.782275	7.662125	7.332575
F. S. Catanico	-	-	-	-	-
Gusa	14.438995	14.663045	17.462395	15.207015	15.207015
Indahag	-	2.000000	2.000000	2.000000	2.000000

CLUP Volume 3 – The Sectoral Studies

Lapasan	14.756730	15.126380	15.795950	15.603050	15.603050
Macabalan	1.355500	1.355500	1.355500	2.014450	2.014450
Macasandig	0.787200	0.538700	0.475200	0.475200	0.475200
Nazareth	1.955400	1.956400	1.869200	-	-
Puerto	3.401385	2.947760	3.681578	11.608223	11.608223
Puntod	18.131090	18.298190	18.487790	24.422679	24.422679
Tablon	10.737875	11.518975	11.625100	18.084100	18.084100
Brgy. 1	0.7176275	0.717627	0.717627	0.717627	0.717627
2	0.835371	0.835371	0.796731	0.796731	0.796731
3	0.839050	0.839050	0.839050	0.839050	0.839050
4	1.012800	1.012800	1.022170	1.022170	1.022170
5	1.056758	1.056758	1.056783	1.056783	1.056783
6	0.276750	.276750	0.194550	0.194550	0.194550
7	1.236905	1.236965	1.272765	0.872765	0.872765
8	1.898855	1.898955	1.898955	1.898950	1.898950
9	1.941360	1.941360	1.967510	1.975110	1.975110
10	0.485850	0.485850	0.485850	0.485850	0.485850
11	1.550256	1.569806	1.606406	1.606406	1.606406
12	1.127950	1.127950	1.129325	1.129325	1.129325
13	.480860	0.480860	0.483460	0.483460	0.483460
14	1.9499895	1.949989	1.781614	1.781614	1.781614
15	0.308950	0.308950	0.308950	0.308950	0.308950
16	0.791560	0.791560	0.791560	0.791560	0.791560
17	-	1.799200	-	-	-
18	0.111700	0.111700	0.112300	0.112300	0.112300
19	0.626000	0.626000	0.626000	0.626000	0.626000
20	0.423900	0.423900	0.400900	0.400900	0.400900
21	2.153950	2.153950	2.153950	2.153950	2.153950
22	2.029875	2.029875	2.039875	2.039875	2.039875
23	2.075700	2.075700	2.060700	2.075700	2.075700
24	5.693850	5.739350	4.6663.50	4.666350	4.666350
25	2.076440	2.050340	2.076340	2.076340	2.076340
26	1.598320	1.598320	1.600020	1.600020	1.600020
27	.597247	0.696347	1.029447	1.029447	1.029447
28	3.548525	3.548525	3.482975	3.507175	3.507175
29	1.509229	15.009229	1.515050	1.266650	1.266650
30	1.367400	1.367400	1.357400	0.648700	0.648700
31	10.789450	10.789450	10.789440	10.789440	10.789440
32	3.309200	3.309200	3.309200	3.309200	3.309200
33	2.317960	2.317960	2.336740	2.191180	2.191180
34	1.368350	1.368350	1.368300	1.368300	1.368300
35	0.952890	0.952890	0.952890	0.952890	0.952890
36	0.593950	0.593950	0.593900	0.593950	0.593950
37	1.057200	1.057200	1.057200	2.076500	2.076500
38	2.287900	2.287900	2.287900	1.549500	1.549500
39	1.067300	1.069300	1.069300	1.069300	1.069300
40	.953300	0.953300	0.953300	0.953300	0.953300
Sub-total	148.1902550	168.403382	156.558471	172.097346	172.953496
Grand Total	202.4193560	247.814063	237.028502	240.749807	241.242861

Source: City Assessment Department

Annex C Infrastructure Sector Annex Tables/Matrices

Information and Communications Technology

**Annex Table 21
Communication Services Facilities, 2011
Cagayan de Oro City**

		Type	Location (Barangay)	Ownership		Type of Equipment	No. of Subscriber		
				Public	Private		Res	Com	Total
I.		Postal Service							
II.	A	Telephone Service Provider							
		Philcom-PLDT	Max Suniel St., Carmen CDOC		x	NECNEAY GIEV	10908	4438	15346
		MISORTELE	A. Luna St, CDOC	x		SAMSUNG MADRTDX 1B	5557	4135	9692
		SMART B BAND INC	LICOAN ST, CDOC		x	HICOM 392	2879	428	3307
		TELECOM OFFICE	VILLARIN ST, CDOC	x		VT 100	1974	191	2165
		PLDT-LDC	LICOAN ST, CDOC		x	SIEMENS EWSD			
		SOTELCO	PATAG, CDO		x	NEAX2400			
		BAYANTEL	A. LUNAST, CDO		x				

B. Cellular Mobile Telephone Service Providers

- 1 SMART Communications Inc. / Piltel (Talk n Text)
- 2 Globe Telecom, GMCR Inc. / ISLACOM (Touchmobile)
- 3 DIGITEL MOBILE Phils. Inc. (Suncellular)

C. Telephone Long Distance Exchange (Inter. Exchange Carrier)

- 1 PLDT-Philcom
- 2 Bayantel Telecom, Inc
- 3 PLDT

Innove'/Globe

D. Broadband Networks

- 1 PLDT
- 2 Globe Telecom/Innove' Communications
- 3 PLDT Philcom Corp
- 4 ISS/Bayantel
- 5 Parasat /Cable 21 Technologies
- 6 SBI/ Crustelco
- 7 Sotelco (Datacom Mozcom)
- 8 DC tech Microservices Inc.
- 9 Oro Graphics Inc. (Maquit Technologies)

III. Trunked Radio Station

- 1 Mobile Com/UTSI

IV. Internet Service Provider (Registered)

- 1 Bayantel Telecommunication Inc
- 2 Cable 21 Technologies
- 3 DC Tech Microservices, Inc.
- 4 Philcom On-Link
- 5 DATA Com Mozcom Cagayan
- 6 PPT&T
- 7 Oro Graphics Inc. (Oro Magnet Technologies)

V. TV Stations

- 1 ABS-CBN Broadcasting Corporation (DXCS-TV), Bulua, CDO
- 2 AMCARA Broadcasting Network (DXEC-TV), Bulua, CDO
- 3 Radio Mindanao Network Inc., (DXHB-TV), Velez St, CDO
- 4 Gateway UHF TV Broadcasting Inc. (DXGC-TV) Upper, Carmen, CDO

- 5 Associated Broadcasting Corp. (DXTE-TV), Bulua, CDO
- 6 GMA Network, Channel 12, Malasag, Cugman, CDO
- 7 RGMA Network Inc (UHF) Malasag, Cugman, CDO

VI. Cable TV Providers

- 1 Parasat Cable TV Inc., Lapasan, CDO
- 2 Jade Cable TV System inc., Lapasan
- 3 DEARBC Cable network, Bugo, CDO

VII. Broadcast Station

A. AM Radio

- 1 Radio Mindanao Network (DXCC), Velez Sts CDO
- 2 Radio Philippines Network (DXCO) Gusa, CDO
New Social Broadcasting Network Company (DXKH)
Bayabas, CDO
- 3 Bayabas, CDO
- 4 Radio Philippine Corporation (DXCO) Igpit, Opol, Mis. Or,
- 5 Phil. Broadcast Service (DXIM) Agustin-Velez, St, CDO

B. FM Stations

- 1 Radio Mindanao network (DXVM), Velez Sts. CDO
- 2 National broadcasting Corporation (DXRL), Nazareth, CDO
- 3 Radio Natin (DXHY), Patag, CDO
- 4 University of Mindanao (DXWZ)-Osmeña St., CDO
- 5 Rajah Broadcasting Network Upper Carmen, CDO
- 6 Saraga Management Corporation (DXJL), Borja St., CDO
- 7 Quest broadcasting Inc (DXKB), Consolacion, CDO
- 8 FSB Radio Network Inc (DXBL) Lapasan, CDO
- 9 Progress Broadcasting Corp. (DXNY) Corrales St
Republic Broadcasting System Inc.(DXLX), Pabayo Hayes St.
CDO
- 10 ABS-CBN Broadcasting network (DXEC), Bulua, CDO
- 11 ALIW Broadcasting Corp. (DXQR) Hayes-Velez St., CDO
- 12 Manila Broadcasting Corporation (DXKS) Velez CDO
- 13 Philippine Broadcasting Corp. (DXYR), Velez St. CDO
Hypersonic Broadcasting Center (Magnum), Recto Avenue,
CDO

Annex Table 22
List of Wireless Broadband Providers within Cagayan de Oro City (as of 2011)

Smart Broadband, Inc.	Location
	Balulang CDO: Brgy. Balulang, Cagayan de Oro City
	Agora: Agora St., Brgy. Lapasan, Cagayan de Oro City
	Xavier Estates: In front of Xavier Estate, Lumbia Highway, Cagayan de Oro City
	Rivera St. cor. Corrales Ave., Cagayan de Oro City
	Cogon: JR Borja cor. Guillermo St., Cogon, Cagayan de Oro City
	Puerto: Purok 6, Puerto, Cagayan de Oro City
	Nazareth: Mayor Malvar St., Upper Macasandig, Cagayan de Oro City
	Canitoan: PN Roa Road, Brgy. Canitoan, Cagayan de Oro City
	Indahag: Sitio Linag, Brgy. Gango, Indahag, Cagayan de Oro City
	Kauswagan: Eagle St., cor. Kauswagan Road, Brgy. Kauswagan, Cagayan de Oro City
	Bulua: Zinco Compound., Bulua, Cagayan de Oro City
	GUSA: Gusa Highway, Gusa, Cagayan de Oro City
	4815 PLDT Puntod (PLDT_CDO): Licoan St., Brgy. Puntod, Cagayan de Oro City
	LUMBIA: Lot C-1B, National Highway, Brgy. Lumbia, Cagayan de Oro City
	Bulua, Cagayan de Oro City
	Gusa, Cagayan de Oro City
	Brgy. Kauswagan, Cagayan de Oro City
	PN Road, Brgy. Canitoan, Cagayan de Oro City
	JR Borja cor Guillermo St., Cogon, Cagayan de Oro City
	D86 CDO Patag:
	La Buena Vida: Brgy. Poblacion, Lumbia, Cagayan de Oro City
	Agusan: (formerly CDO_Cugman): Brgy. Agusan, National Highway, Cagayan de Oro City
	Galendo Compd., Apitong St., Brgy. Tablon, Cagayan de Oro City

Annex Table 23
List of Cellsites by CMTS Providers within Cagayan de Oro City
(as of March 2011)

Digital Mobile Phils., Inc. (Sun Cellular)	Location
	(Hembrador Property): Zone 4 Upper Bulua, Cagayan de Oro City
	DENR Property, Pigtaawan Ridge, Sitio Malasag, Brgy. Cugman, Cagayan de Oro City
	(Ficco Bldg.): Brgy. Cogon, Cagayan de Oro City
	(COC Bldg.): Brgy. Carmen, Cagayan de Oro City
	P3_04: National Highway, Galaxy Road, Brgy. Gusa, Cagayan de Oro City
	Sayre Hi-way, Purok 6, Brgy. Puerto, Cagayan de Oro City
	Zone 1, Brgy. Iponan, Cagayan de Oro City
	Phase 1, NHA Subd. Brgy. Kauswagan, Cagayan de Oro City
	Upper Balulang, Cagayan de Oro City
	Cagayan de Oro Airport (Arguelles Property) Lumbia, Cagayan de Oro City
	Aluba Subd., Camiguin St., Macasandig, Cagayan de Oro City
	Dr. Jesus Gabor St., Zone 1, Brgy. Kauswagan, Cagayan de Oro City
	East Bound Terminal, Gusa, Cagayan de Oro City
	Upper Carmen, Cagayan de Oro City
	Gaisano South (IBS) – CM Recto Ave., Corrales, Cagayan de Oro City
	Neri's Lot – Purok 9, Baloy, Tablon, Cagayan de Oro
	Limketkai Commercial Center, Cagayan de Oro City
	Capitol University – J. Pacana St., Puntod, Cagayan de Oro City
	Brgy. Canitoan, Cagayan de Oro City
	Brgy. Balulang, Cagayan de Oro City
	Zone 3, Agusan, Cagayan de Oro City
	Along Barangay Road, Zone 6, Bulua, Cagayan de Oro City
	RN Pelaez Blvd., Kauswagan, Cagayan de Oro City
	Target Range, Patag, Cagayan de Oro City
	Borja Extension., Camaman-an, Cagayan de Oro City
	CDO_BULUA4 – Along Brgy. Road., Zone 6, Bulua, Cagayan de Oro City
	Purok 19 Baloy, Brgy. Tablon, Cagayan de Oro City
	Macanhan, Carmen, Cagayan de Oro City
	Adelfa Extension., Carmen, Cagayan de Oro City
	San Restituto St., Brgy., Bayabas, Cagayan de Oro City
	COR_Nazareth2 – 12 TH – 20 TH Barangay Nazareth, Cagayan de Oro City

Waste Management

Annex Table 24
Comparative flow of solid Waste volume collected and dumped at City
Dumpsite from year 2010 to May 2012

	2010	2011	2012
January	14,706	20,714	51,122
February	13,797	19,405	24,776
March	15,473	22,258	25,901
April	13,610	21,199	20,557
May	13,217	22,150	25,949
June	14,262.70	24,945	
July	14,741.90	23,436	
August	15,169.00	24,888	
September	14,988	22,582	
October	14,428	22,165	
November	14,456	21,600	
December	18,654	27,484	
TOTAL	177,502.8 cu m (77,568.4 tons)	272,826 cu m (119,224.9 tons)	

Source: