

Forest
Carbon
Statistic
of
Central
Sulawesi

1990-
2011

Indrawan Suryadi

English
version

CONTENT

	Page
CONTENT	i
TABLE	iii
FIGURE	v
I. PREFACE	1
1.1 Background.....	2
1.2 Objective.....	3
1.3 Deliverable.....	3
1.4 Scope	3
1.5 Definition	3
II. METHODOLOGY	5
2.1 Data and Sources	6
2.2 Method	6
III. GEOGRAPHICAL CONDITION	7
3.1 Geographical area.....	8
3.2 Topography.....	8
3.3 Geology	11
3.4 Hidrology	11
IV. ADMINISTRATION.....	14
4.1 Administration Area.....	15
4.2 Profile of Forestry Service of Central Sulawesi.....	18
V. POPULATION	21

5.2 Number of Population.....	22
5.3 Occupation	22
5.4 Education.....	23
VI. NATURAL RESOURCE	24
6.1 Landcover and Landuse	25
6.2 Forest	67
a. Forest function	67
b. Critical land.....	75
6.3 Agriculture	95
6.4 Estate crop.....	100
6.5 Mining.....	102
VII. CARBON STOCK.....	108
VIII. FOREST DEGRADATION AND DEFORESTATION	196
8.1 Forest degradation	197
8.2 Deforestation.....	202
IX. CARBON EMISSION AND SEQUESTRATION	208

TABLE CONTENT

No	Title	Page
3.1	River Basin of Cross Province	11
3.2	National Strategic River Basin	12
3.3	Lake Region of Protected Areas in Central Sulawesi	12
3.4	Rainfall and number according to the Rainy Day Month in Central Sulawesi, 2011	13
4.1	Area of Central Sulawesi Province by District and City	15
4.2	Division of Administrative Region by District and City 2011	16
5.1	Number dan Growth Population of Central Sulawesi 1990–2011	22
5.2	Number of Population, Villages, Population Density per Village by District/City, 2011	22
5.3	Percentage of working population by main industry, 2011-2012	23
5.4	Gross enrollment ratio of education by district/city and by age group, 2011	23
6.1	Land use and land cover Area of Central Sulawesi	25
6.2	Landuse and land cover area of Central Sulawesi by distric/City and subdistrict	26
6.3	Forest area based on function in the region of Central Sulawesi	67
6.4	Forest function area in the Central Sulawesi by District / City and Subdistrice	68
6.5	Extensive logging in the province of Central Sulwesi by District/ City	72
6.6	Critical Land Area by Forest Function	75
6.7	Critical Land Area based on Forest Function by District/City and Subdistrict	76
6.8	Agriculture area by District/City	95
6.9	Area of Estate Crop in Central Sulawesi	100
6.10	Area of Estate Crop Central Sulawesi Tengah by District/City	102
6.11	Area of Mine in Central Sulawesi	102
6.12	Area of Mine in Central Sulawesi by District/City and Subdistrict	103
7.1	Carbon Stock based on Land use and Land Cover in Central Sulawesi	109
7.2	Carbon Stock in Central Sulawesi by District/City and Subdistrict	110
7.3	Carbon Stock based on Land use-Land Cover by District/City and Subdistrict 2011	115
7.4	(Continued). Carbon Stock based on Land Use-Land Cover by District/City and Subdistrict 2011	123
7.5	Carbon Stock based on Land Use-Land Cover by District/City and Subdistrict 2009	131
7.6	(Continued). Carbon Stock based on Land Use-Land Cover by District/City and Subdistrict 2009	139
7.7	Carbon Stock based on Land Use-Land Cover by District/City and Subdistrict 2006	147
7.8	Continued). Carbon Stock Based on Land Use-Land Cover by District/City and Subdistrict 2006	155
7.9	Carbon Stock Based on Land Use-Land Cover by District/City and Subdistrict 2003	163
7.10	(Continued). Carbon Stock Based on Land Use-Land Cover by District/City and Subdistrict 2003	172
7.11	Carbon Stock Based on Land Use-Land Cover by District/City and Subdistrict 2003	180
7.12	(Continued). Carbon Stock Based on Land Use-Land Cover by District/City and Subdistrict 2000	187
8.1	Forest degradation area in Central Sulawesi 2000–2011	197

8.2 Forest degradation area by District/City and Subdistrict	197
8.3 The rate deforestation in Central Sulawesi	202
8.4 Area of deforestation by District/City and Subdistrict	203
9.1 Emission and carbon sequestration (ton C) in Central Sulawesi	209
9.2 Carbon emission and sequestration based on landuse-land cover 2009–2011	210
9.3 (Continued). Carbon emission and sequestration based on landuse-land cover 2009–2011	211
9.4 Carbon emission and sequestration based on landuse-land cover 2006–2009	213
9.5 (Continued). Carbon emission and sequestration based on landuse-land cover 2006–2009	214
9.6 Carbon emission and sequestration based on landuse-land cover 2003–2006	216
9.7 (Continued). Carbon emission and sequestration based on landuse-land cover 2003–2006	217
9.8 Carbon emission and sequestration based on landuse-land cover 2000–2003	219
9.9 (Continued). Carbon emission and sequestration based on landuse-land cover 2000–2003	220

FIGURE

No	Title	page
3.1	Slope Class Map of Central Sulawesi	9
3.2	Elevation Map of Central Sulawesi	10
4.1	Percentage of Central Sulawesi Areas base on District and City	15
4.2	Administration Map of Central Sulawesi based on District and City	17
4.3	Forestry Service Structure of Central Sulawesi	20
6.1	Chart of Land Use and Land Cover Change of Central Sulawesi	27
6.2	Percentage of Forest Function Area in Central Sulawesi	67
6.3	Map of Forest Spatial Plan	73
6.4	Map of Forest Concession and Timber Plantation	74
6.5	Percentage of Critical Land Area of Central Sulawesi	75
6.6	Critical Land Area based on Forest Function	76
6.7	Map of Critical Land Area of Central Sulawesi	94
6.8	Chart of Agriculture Areal of Central Sulawesi	99
6.9	Chart of Estate Crop Area in Central Sulawesi	100
6.10	Map of Estate Crop in Central Sulawesi	101
6.11	Map of Mining Area of Central Sulawesi	107
7.1	Chart of Carbon Stock Change (ton C) based on Land use/Land Cover in Central Sulawesi	110
8.1	Chart of Forest Degradation in Central Sulawesi	197
8.2	Chart of deforestation rate in Central Sulawesi	202
9.1	Chart of carbon emission in Central Sulawesi	209
9.2	Chart of carbon emission and sequestration change in Central Sulawesi	209

I. PREFACE

I. PREFACE

1.1 Background

Due to reduce the emission from deforestation and forest degradation, international approach are needed which can bridge economy development and local community livelihood. It will stipulate the Developing countries to reduce the emission from deforestation and forest degradation if the incentives in line with the opportunity cost from the landuse activity.

Various international meeting on climate change has been made in various countries. In mid-December 2010, an international convention held specifically on climate change, COP (Conference of the Parties) 16, in Cancun, Mexico. Agreement Cancun (Cancun Agreement) are considered successfully renewed confidence in many people to return to work together in addressing climate change. Cancun Agreements managed to provide a framework for a critical component in efforts to tackle climate change, one of which is the REDD + (Reducing Emissions from Deforestation and Forest Degradation, forest carbon stock enhancement and conservation). Cancun Agreements provide a strong framework for the inclusion of tropical rainforest in the main agenda of handling climate change, through REDD +, adaptation, conservation and enhancement of forest carbon stocks and sustainable forest management. In addition, the Cancun Agreements scheme is a "recognition" of the active contribution of developing countries in climate change mitigation efforts.

REDD + has significance for Indonesia because Indonesia has the third largest area of tropical rainforest in the world. In addition, the call to exchange experiences from activities aimed at reducing emissions from deforestation and the destruction of tropical forests, was first formally stated in the "Bali Action Plan" produced at the UNFCCC COP-13, held in Bali in 2007 . Therefore, the Indonesian government has made a commitment to reduce greenhouse gas emissions (GHG) by 26% with domestic funding and 41% with the help of the international in 2020 from the level of emissions BAU (Business As Usual / Building without Emission Reductions) .

In order to realize this commitment, on May 26, 2010 the Government of Indonesia has signed a memorandum of agreement (Letter of Intent or LOI) with the Government of the Kingdom of Norway to make efforts to reduce greenhouse gas emissions from deforestation and forest degradation and peatland conversion. Since the signing of the LoI, the Government of Indonesia has made progress in the implementation of REDD + preparations, one of which is the presence of the UN-REDD Programme. UN-REDD Programme is a national program of co-operation between the Ministry of Forestry with UN-Agencies (FAO, UNDP and UNEP). The purpose of the UN-REDD Programme is to assist the Government of Indonesia to be ready to welcome the implementation of REDD + mechanism at the end of 2012. Provincial Election pilot conducted by UN-REDD based kriteri-established criteria.

In March 2010 the Inception Workshop was held by UN-REDD Indonesia Program in Jakarta. Based on the presentation of the Forest Region of Central Sulawesi province, review the potential of Central Sulawesi based selection criteria Provincial pilot by UN-REDD and input from stakeholders, the workshop decided that the province of Central Sulawesi was selected as Demonstration Activity REDD+, which in turn established by the Secretary-General of the Ministry of Forestry Number: 5.786/II-KLN/2010 dated July 26, 2010.

Due to preparation and implementation of REDD+ mechanisms, data and information are required to identify carbon stocks for each type of land cover, emissions and carbon sequestration which caused from each land cover changes (degradation or deforestation), including the socio-economic conditions of society.

1.2 Objective

Preparation of carbon forestry statistics book aims to document data and information on carbon storage, carbon sequestration, and carbon emissions caused by deforestation and degradation. The document is expected to be a source of data and information in the implementation of REDD + mechanisms both at national and local level in the province of Central Sulawesi.

1.3 Deliverable

Preparation of documents Stats of Forest Carbon Central Sulawesi is intended for stakeholders at the international, national, and local (Central Sulawesi) involved in the implementation of REDD +

1.4 Scope

The scope of the preparation of the Forest Carbon Stats Central Sulawesi is the presentation of data and information relating directly or indirectly to the implementation of REDD +.

1.5 Definition

Definition used in the preparation of the Forest Carbon Stats of Central Sulwesi:

BPS : Statistic Center Bureau

Forest degradation : Decline in tree density and / or increasing damage to forests caused loss of forest products and other ecological services from forests.

Deforestation	: logging and conversion of forest cover land permanently for a variety of other benefits.
HPH	: Permit issued for selective logging in natural forests for a certain period, typically 20 years, and renewed for a further period, generally 20 years.
Conservation Forest	: Forests that are designed for the protection of wildlife or their habitat, usually located in national parks and other protected areas.
Convertible Forest	: Forests are designed for clearance and permanent conversion into other forms of land use, especially timber industrial or plantation.
Protection Forest	: Forests are intended to carry out the functions of the environment, in particular to maintain vegetation cover and soil stability on steep slopes and protect watersheds.
Limited Production Forest:	Forests allocated for timber production with low intensity. Limited production forest is generally located in the mountainous region where steep slopes complicate to logging operation.
Production Forest	: Forests are located within the boundaries of the concession (HPH licensed) and managed to produce timber.
Carbon dioksida (CO ₂)	: Gases in the atmosphere, produced as a byproduct of combustion. Carbon dioxide can also be released when the activities of land use/land cover conversion and industrial activities.
Estate Crop	: Crops grown on the farm. Kind, including rubber, oil palm, coconut, cocoa, and tea.
REDD-plus	: REDD framework broader include forest conservation, sustainable forest management or enhancement of carbon stocks in order to implement REDD participation of the wider community and to reward countries that are trying to protect their forests.
Carbon Sequestration	: The process of binding of CO ₂ in the atmosphere by plants through photosynthesis then store it in the form of biomass in different parts of the plant.
Carbon stock	: Media or point of carbon sequestration and storage in the form of organic matter, forest vegetation, sea and land.

II. METHODOLOGY

II METHODOLOGY

2.1 Data and Sources

Data used in the preparation of carbon forestry statistics of Central Sulawesi Province include:

- Spatial Data of Appointment forests and waters, Director General of Planning Ministry of Forestry.
- Spatial data of land cover and land use, Director General of Planning Ministry of Forestry.
- Administrative area Spatial Data of Central Sulwesi, BAPPEDA of Central Sulawesi
- Plantation Spatial data, Plantation Office of Central Sulawesi Province
- Mining Spatial data, the Department of Mines of Central Sulawesi Province
- Watershed,Spatial Data BPDAS Central Sulawesi province
- Topographic Spatial Data, SRTM-USGS
- Carbon Stock Data / emission factors, DG Planning Ministry
- Geography, population, and administration Data, Bureau Statistic of Central Sulawesi Province

2.2 Methode

Carbon storage value is determined by the type of land cover. To determine the total carbon storage is an accumulation of carbon deposits on the value of each type of land cover per unit area (tons C / ha) multiplied by luasanya. As for determining the absorption or emission of carbon is influenced by any changes in land cover. Carbon emissions are determined by changes in carbon stocks due to deforestation and degradation or to the use and non-forest land cover. Carbon emissions is the difference between carbon storage in forest conditions in the area of carbon deposits on non-forest land cover conditions, which the non-forest land cover is terjdi as a result of deforestation or forest degradation. In contrast to carbon absorption is the addition of carbon stocks as a result of the addition/vegetation growth. In the preparation of this carbon squestration statistics is the value of the increase in carbon in non-forest land cover and forest or vacant land into vegetated land.

Determination of the land cover and the land use widespread distribution distribution of carbon stocks, distribution of carbon sequestration dan emision, and spatial analysis done through a process of spatial data overlay administrative area central Sulawesi province.

III. GEOGRAPHICAL CONDITIONS

III. GEOGRAPHICAL CONDITION

3.1 Area and Geographical Position

Central Sulawesi is located in Central of Sulawesi island, with total terrain area 61,230 km² or ca. 36.47% of Sulawesi island (spasial data of Central Sulawesi, Planning and Development Agency Of Central Sulawesi). Area of Central Sulawesi waters reached 193,923.75 km² by 1140 as the number of islands with boundaries as follows:

- Northern boundaries : Sulawesi Sea and province of Gorontalo
- Eastern boundaries : Maluku and North Maluku
- Southern South boundaries : Sulawesi province and Southeast Sulawesi province
- Western boundaries : Makassar Strait and West Sulawesi province.

Based on geographic, Central Sulawesi located between 2°22' north latitude and 3°48' south latitude, 119°22' and 124°22' east longitude. Central Sulawesi geostrategic position in the middle of the archipelago and in the middle of the island of Sulawesi, the waters were on the track corridor from north to south towards the ocean pacific (Makassar Strait and Sulwesi Sea).

3.2 Topography

Based on landslope (Central Sulwesi Statistic Central Berau 2011), Central Sulawesi highlands are detailed as follows:

- slope 0–3° = 11.8 %
- slope 3–15° = 8.9 %
- slope 15–40° = 19.9 %
- slope over 40° = 59.9 %

Meanwhile, based on elevation (high of sea surface), land in Sulawesi Tengah Province consists of:

- 0 m - 100 m = 20.2 %
- 101 m - 500 m = 27.2 %
- 501 m - 1000 m = 26.7 %
- 1,001 m and over = 25.9 %

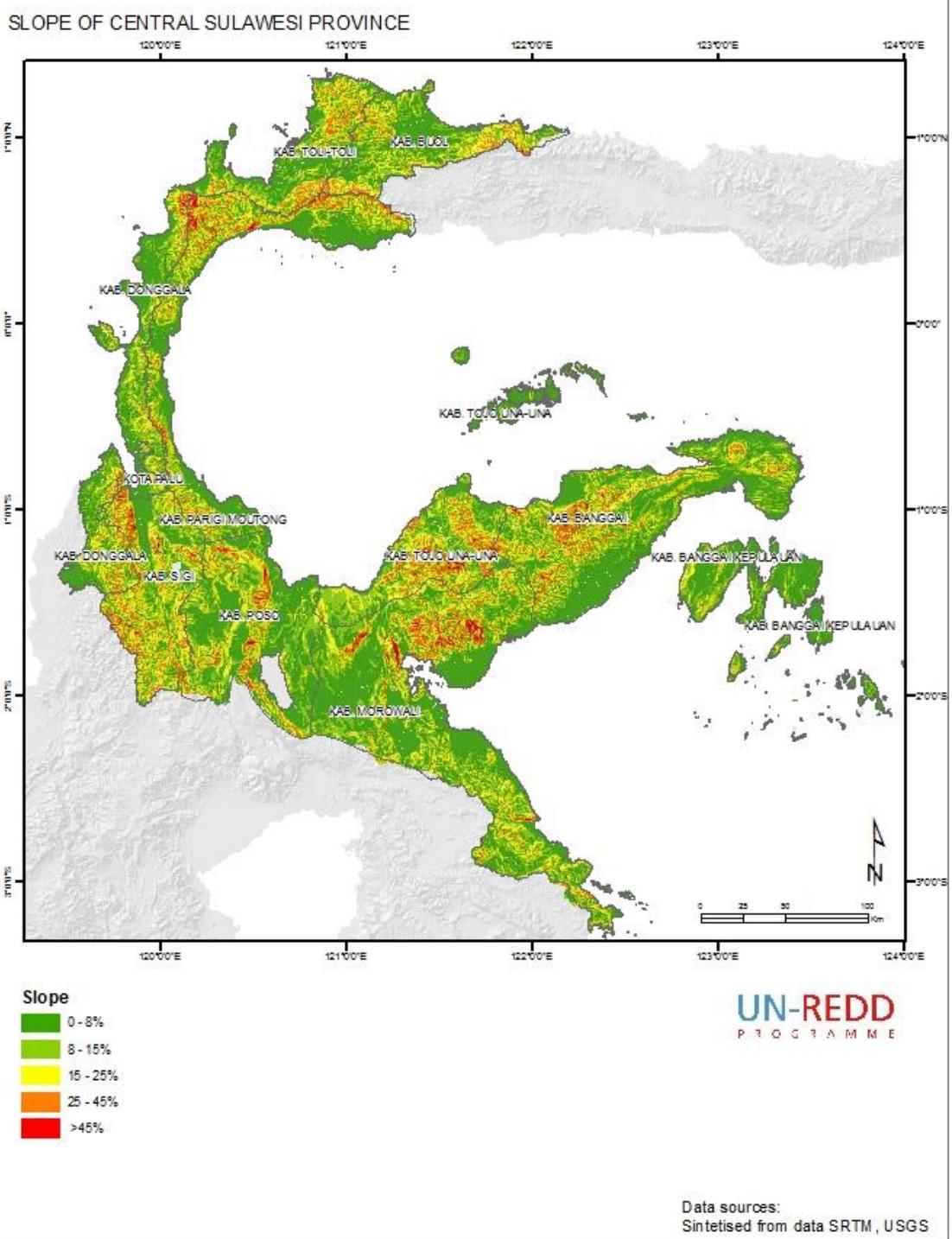


Figure 3.1 Slope Map of Central Sulawesi

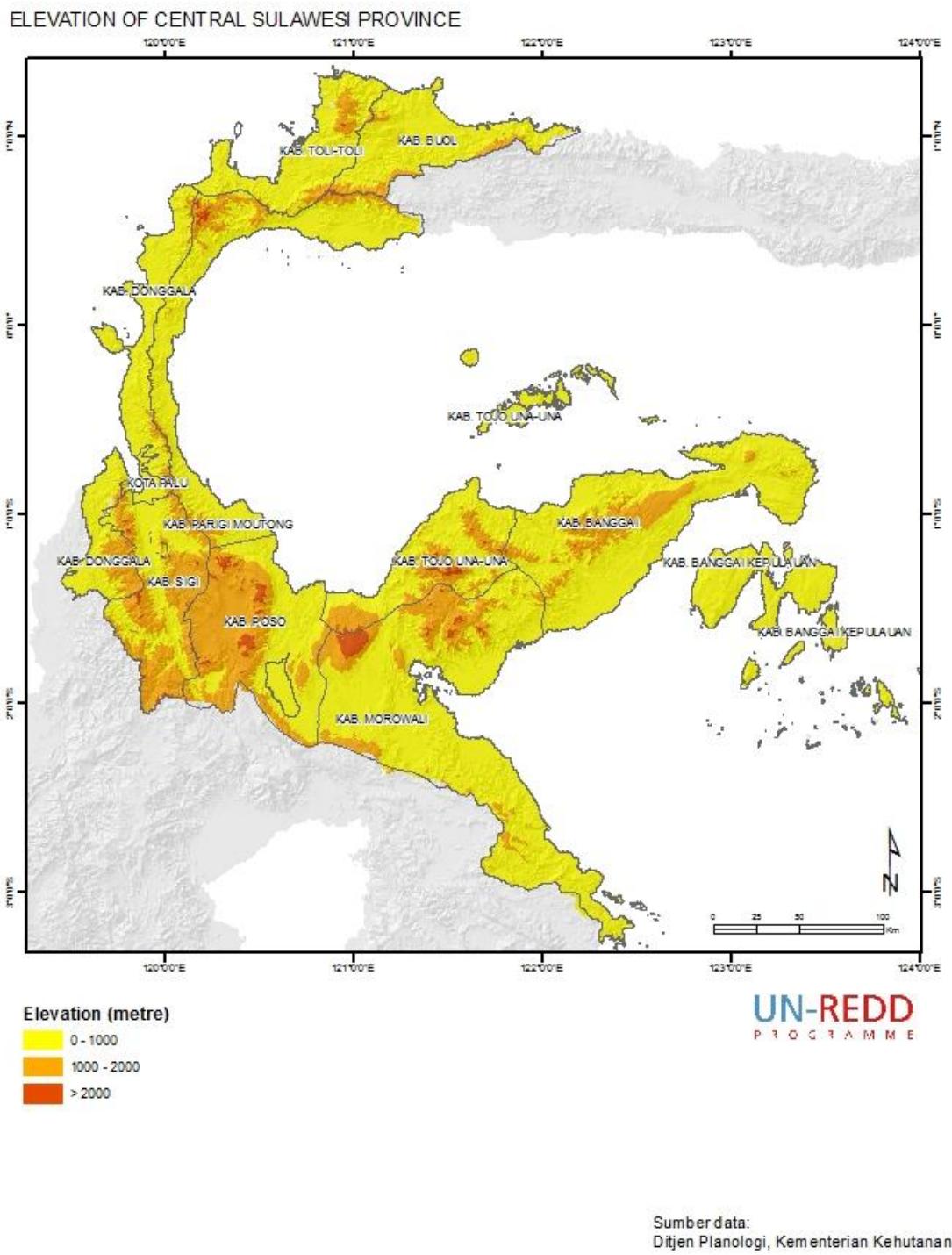


Figure 3.2 Elevation Map of Central Sulawesi

3.3 Geology

Structure and geological characteristics of Central Sulawesi region is dominated by mountain ranges and plateaus, ranging from the Buol and Tolitoli, there are mountain ranges up into the mountains in the province of North Sulawesi. In Donggala and there Moutong Parigi isthmus flanked by the Makassar Strait and the Gulf Tomini, but it is mostly a mountainous and hilly. In the south and east that includes the district of Poso, Tojo Unauna, Morowali and Banggai, there is a very tight mountain ranges like Mountains Tokolekayu, Verbeek, Tineba, Pampangeo, Fennema, Balingara, and Batui. Most of the mountainous areas that have steep slopes with above 45 degrees (BPS Central Sulawesi 2011).

3.4 Hydrology

Along the Central Sulawesi there Watershed flowing in the district and city. In addition, to the watershed there are also several lakes that are almost entirely located in protected areas (BPS Sulteng 2011).

Table 3.1 River Basin of Cross Province

No.	River Basin	Watershed	Watershed Area (Ha)	District/City
1.	Palu – Lariang	Palu	3.043	District Sigi /Palu City
		Lariang		District Sigi /Palu City
		Watutela		Palu City
		Pasangkayu		District Donggala District Mamuju Utara
2.	Pompengan-Lorena	Mesangka	40,62	
		Surumba		District Donggala
		Sibayu		
		Tambu		
3.	Lasolo – Sampara	Lasolo		Sout Sulawesi Province – South East Sulawesi Province
		Sampara		– District Morowali
		Lalindu		
		Aopa		Sout Sulawesi Province – South East Sulawesi Province
		Luhumbuti		– District Morowali
4.	Randangan	Landawe		
		Amesiu		
5.	Kaluku - Karama			Gorontalo Province – Central Sulawesi Procince
				West Sulawesi Province – Central Sulawesi Province

Sources: Department of Public Works, Central Sulawesi RTRWP Draft 2010-2030

Table 3.2 National Strategic River Basin

No.	River Basin	Watershed	Watershed Area (Ha)	District/City
1.	Parigi – Poso	Parigi- Poso	1,101.87	District Parigi Moutong
		Tompis	52.5	District Poso
		Bambalemo		District Poso
		Podi		District Parigi Moutong
		Dolago	125	District Poso / District
		Tindaki	53	Tojo Una-Una
2.	Laa – Tambalako	Laa	2,875.60	District Parigi Moutong
		Tambalako	1,045.6	District Poso
		Tirongan		District Morowali
		Salato	623.12	District Morowali
		Morowali	372.5	District Morowali
		Sumare	237,5	District Morowali
		Bahonbelu		District Morowali
		Bahodopi	246.87	District Morowali

Sources: Department of Public Works, Central Sulawesi RTRWP Draft 2010-2030

Table 3.3 Lake Region of Protected Areas in Central Sulawesi

No.	Lake	Area (Ha)	Location
1	Poso	36,235.78	District Poso (Subdistrict of Pamona Utara and Pamona Selatan)
2	Lindu	3,428.49	District Sigi (Subdistrict Kulawi)
3	Rano	296,2	District Donggala (Subdistrict Balaesang)
4	Dampelas	542.56	District Donggala (Subdistrict Dampelas)
5	Batu Doka	14.162	District Parigi Moutong (Subdistrict Moutong)
6	Bulanungan	67,823	District Parigi Moutong (Subdistrict Moutong)
7	Deddi	8.42	District Parigi Moutong (Subdistrict Moutong)
8	Rannobal	514.5	District. Morowali (Subdistrict Bungku Utara)
9	Rano Kodi	263.02	District Morowali (Subdistrict Bungku Utara)
10	Tiu	441.99	District Morowali (Subdistrict Petasia)
11	Tambing	5.85	District Donggala
12	Patawu	71.1	District Donggala
13	Dawanga	24.53	District Donggala

Sources: Department of Public Works, Central Sulawesi RTRWP Draft 2010-2030

Table 3.4 Rainfall and number according to the Rainy Day Month in Central Sulawesi, 2011

Month	Rainfall (mm)	Number Rainy Day
January	62.6	20
Pebruary	87.5	19
March	45	21
April	23.7	19
May	34.3	16
June	76.2	20
July	32.5	15
August	51.6	18
September	100.6	18
October	50.7	18
November	53.5	14
Desember	48.3	19

Source: Meteorological Station of Mutiara Palu in Central Sulawesi BPS 2012

IV ADMINISTRATION

IV. ADMINISTRATION

4.1 Administration Area

The administration, to the 2011 of Central Sulawesi province consists of 10 districts and 1 town that Banggai, Banggai Islands, Buol, Donggala, Morowali, Parigi Moutong, Poso, Sigi, Tojo Una-Una, Tolitoli, and Palu. The number of districts as many as 161 districts, with the number of Village and urban 166 and 1682 respectively (BPS Sulteng 2012).

Table 4.1 Area of Central Sulawesi Province by District and City

No	District/City	Area (Km ²)	Capital subdistrict
1	Banggai	9,192	Luwuk
2	Banggai Kepulauan	3,109	Tinakung
3	Buol	3,874	Biau
4	Donggala	4,974	Banawa
5	Morowali	13,073	Bungku Tengah
6	Parigi Mountong	6,140	Parigi
7	Poso	7,065	Poso Kota
8	Sigi	4,917	Sigi Biromaru
9	Tojo Una-Una	4,981	Ampana Kota
10	Toli-Toli	3,518	Baolan
11	Palu	387	Palu
Total		61,230	

Source: Administrative area Spatial Data of Central Sulawesi, BAPPEDA of Central Sulawesi

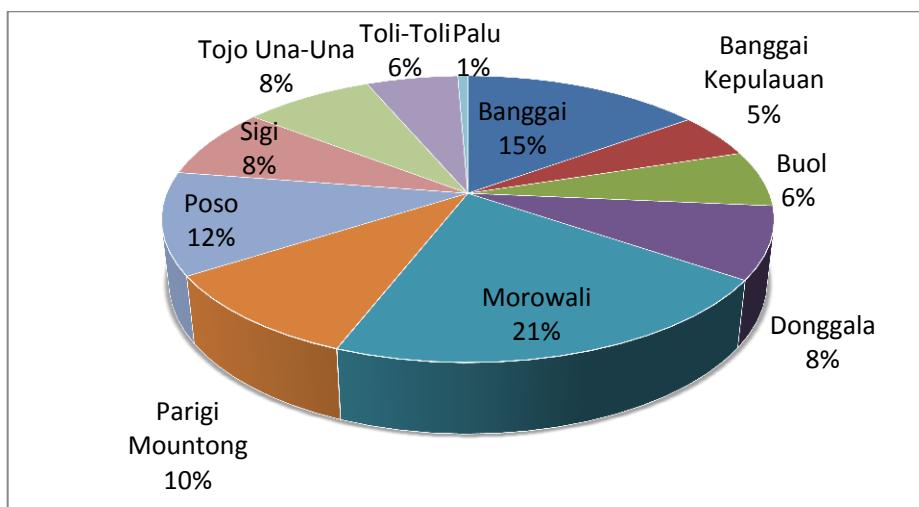


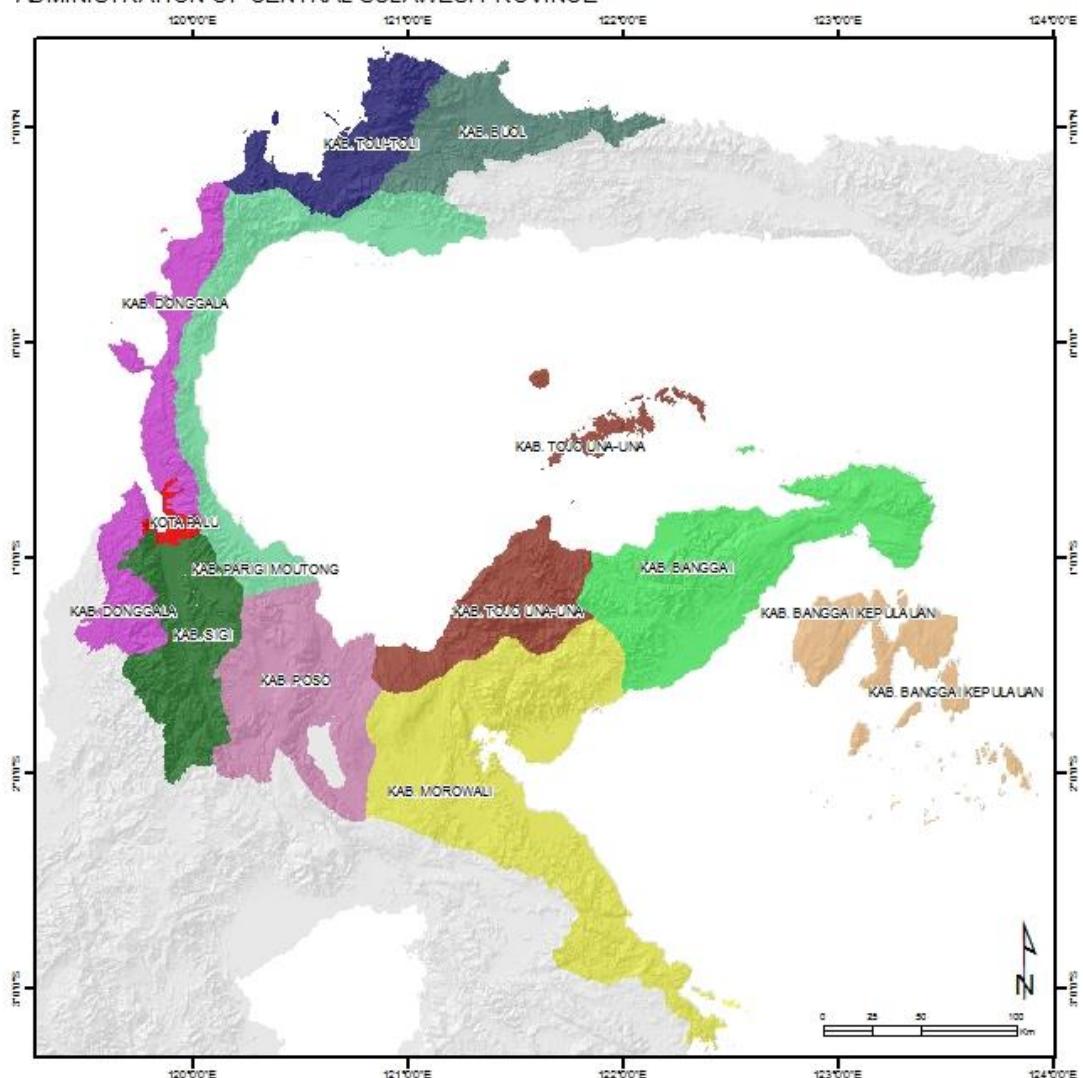
Figure 4.1 Percentage of Central Sulawesi Areas base on District and City

Table 4.2 Division of Administrative Region by District and City 2011

District/City	Number Subdistrict	Number Village	Number Urban	Total Village and Urban
Banggai Kepulauan	19	204	6	210
Banggai	18	293	46	339
Morowali	18	230	10	240
Poso	19	133	23	156
Donggala	16	141	9	150
Toli-toli	10	86	5	91
Buol	11	108	7	115
Parigi Mountong	22	220	5	225
Tojo Una-Una	9	110	12	122
Sigi	15	157	-	157
Palu	4	-	43	43
Total	161	1682	166	1848

Sumber: Statistic Central Bureau 2012

ADMINISTRATION OF CENTRAL SULAWESI PROVINCE



District

CITY OF PALU	MOROWALI
PARIGI MOUTONG	
BANGGAI	POSO
BANGGAI KEPULAUAN	SIGI
BUOL	TOJO UNA-UNA
DONGGALA	TOLI-TOLI

UN-REDD
PROGRAMME

Data sources:
Bappeda of Central Sulawesi Province

Figure 4.2 Administration Map of Central Sulawesi based on District and City

4.2 Profile of Forestry Service of Central Sulawesi

Forestry Service of Central Sulawesi Province was established by Regulation Central Sulawesi No. 06 in 2008 on the Establishment of Organization and Administration of the Regional Bureaus of Central Sulawesi Province. Under the regulation, Forestry Service of Central Sulawesi province has the task of carrying out the affairs of the local government based on the principle of decentralization and de-concentration and forestry assistance. The main duties include coaching, supervision, and implementation of forestry development which includes Secretary, Planning, Business Development of Forest, Land Rehabilitation and Social Forestry and Forest Protection and Nature Conservation.

Development Goals formulated by the Forest Service analysis of current forest conditions as a starting point and guide the development of 5 (five) years in accordance with the functions and role of the Forest Service. Development Goals Regional Forestry Service of Central Sulawesi province in 2016 are:

- 1) Improve optimization of production forest management, increased orderly management of forest products, forest fees orderly, non-tax revenues (tax revenues) in forestry and industrial revitalization and primary timber;
- 2) Increased precondition of sustainable natural resource management in production forests and protected forests;
- 3) Increased functionality and support of production forests and protected forest so as to reduce the risk of natural disasters through community involvement around the forest;
- 4) Reduce forest disturbance and forest product in the administration as well as protection and optimize the management of Tahura Poboya-Paneki;
- 5) Increased implementation of the administrative order, accountability and transparency in planning, financial management, asset and civil servants management of Forest Service.

The goal of the I Forestry Service of Central Sulawesi in 2011-2016 are:

- 1) Increased community participation through community-based forest management and forest health welfare;
- 2) Increased revenue contribution of forestry and forest products industry legally certified;
- 3) Increasing the number of forest management units at the site;
- 4) The maintenance of forest boundaries;
- 5) Sustainable forest management entity (KPH) Dampelas Tinombo;

- 6) Increased forest plantations in order to reduce the rate of forest degradation oriented welfare;
- 7) Decreased levels of forest disturbance and damage to forest areas of strategic;
- 8) Increasing public awareness / stakeholders to protect and preserve the natural resources and environment
- 9) Management of nature conservation area Tahura;
- 10) Realization of increasing the planning, oversight and accountability of the government

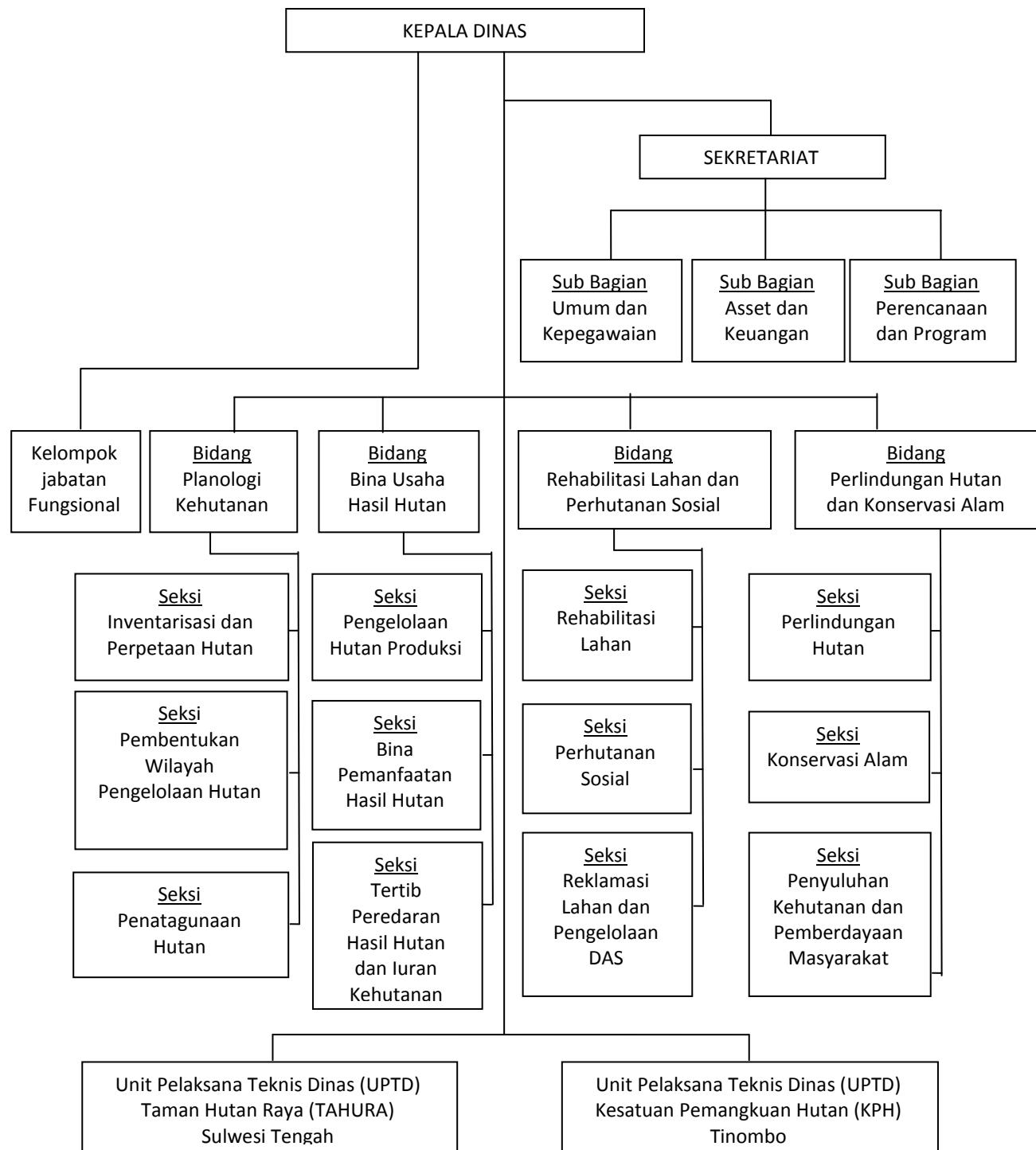


Figure 4.3 Forestry Service Structure of Central Sulawesi

V POPULATION

V. POPULATION

5.1 Number and Growth Population

According to the population census in 2011 the population of Central Sulawesi reached 2.7 million people with an average growth of 1.85% in 1990-2011. The population density of 2016 people person per village.

Table 5.1 Number dan Growth Population of Central Sulawesi 1990–2011

Population Census	Sex		Total (persons)	Population Growth (%)
	Male	Female		
1990	877,039	834,288	1,711,327	
2000	1,113,212	1,062,781	2,175,993	2.52
2005	1,185,880	1,126,981	2,312,861	1.22
2010	1,350,844	1,284,165	2,635,009	1.95
2011	1,375,817	1,307,905	2,683,722	1.71

Source: Statistic Central Bureau of Central Sulawesi 2012

Table 5.2 Number of Population, Villages, and Population Density per Village by District/City, 2011

District/City	Population	Village and Urban	Population means per village
Banggai Kepulauan	174,800	210	832
Banggai	329,609	339	972
Morowali	210,136	240	876
Poso	213,096	156	1366
Donggala	282,752	150	1885
Toli-toli	215,202	91	2365
Buol	134,776	108	1248
Parigi Mountong	421,234	200	2106
Tojo Una-Una	140,358	121	1160
Sigi	219,005	157	1395
Palu	342,754	43	7971

Source: Statistic Central Bureau of Central Sulawesi 2012

5.2 Occupation

Agriculture in general, is the most widely sector employment than the industrial, trade, and services. Almost half of the population in Central Sulawesi to work in the agricultural sector as a major employment (table 5.3)

Table 5.3 Percentage of Working Population by Main Industry, 2011-2012

Main Industry	Tahun/Bulan			
	2011		2012	
	Pebruari	Agustus	Pebruari	Agustus
Pertanian Agriculture	50.26	51.92	48.91	-
Industry	4.13	5.21	6.56	-
Trade, Hotel, and Restaurant	13.17	15.10	14.66	-
Social and Personal Service	18.67	16.21	17.56	-
Others*	13.77	11.55	12.31	-

Source: Statistic Central Bureau of Central Sulawesi 2012

5.3 Education

Table 5.4 Gross Enrollment Ratio of Education by District/City and by Age Group, 2011

District/Kota	Age Group			
	7-12	13-15	16-18	19-24
Banggai Kepulauan	103.12	94.96	69.74	22.43
Banggai	103.11	95.85	74.22	18.08
Morowali	102.40	90.05	62.94	9.85
Poso	101.36	103.14	75.88	29.23
Donggala	104.74	77.21	43.63	10.96
Toli-toli	100.40	75.56	73.08	32.73
Buol	106.78	86.55	71.04	24.09
Parigi Mountong	102.44	75.84	61.95	10.23
Tojo Una-Una	105.72	68.97	68.52	14.88
Sigi	106.71	74.66	45.28	15.06
Palu	100.78	95.10	80.44	57.47
Sulawesi Tengah	103.13	84.94	65.96	24.24

Source: Statistic Central Bureau of Central Sulawesi 2012

VI NATURAL RESOURCES

VI. NATURAL RESOURCES

6.1 Land Use and Land Cover

Table 6.1 Land use and land cover Area of Central Sulawesi

Land Use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Water Body	59,958	60,273	59,958	59,958	59,959
Airport	147	147	147	147	147
Shrub	250,778	285,100	350,004	353,736	363,009
Shrub of Swamp	920	920	920	941	915
Primary Dryland Forest	3,100,004	2,779,047	2,590,233	2,567,835	2,535,039
Secondary Dryland Forest	1,328,181	1,602,543	1,712,312	1,712,256	1,710,159
Primary Mangrove Forest	21,178	20,981	19,426	19,426	19,426
Secondary Mangrove forest	32,335	32,532	34,087	34,065	34,057
Primary Swamp Forest	325	325	325	325	325
Secondary Swamp Forest	7,793	7,793	7,717	7,717	7,717
Settlement	29,267	29,267	29,267	29,287	29,341
Plantation	120,315	120,331	121,115	126,465	126,680
Mining	11,271	11,866	11,866	11,866	11,894
Dryland Agriculture	409,529	411,321	416,867	417,917	428,405
Mixed Dryland Agriculture	548,214	557,515	565,216	573,219	587,704
Swamp	547	232	622	622	622
Grassland	30,890	30,890	30,890	30,890	30,890
Rice Field	102,745	102,964	103,055	103,787	103,822
Embankment	6,201	6,201	6,201	6,201	6,210
Vacant Land	36,913	37,316	37,335	40,902	41,209
Transmigration	4,992	4,992	4,992	4,992	5,028
NoData	2,619	2,565	2,565	2,565	2,565
Total	6,105,123	6,105,123	6,105,123	6,105,123	6,105,123

Sumber: Land Use Spasial Data , Palnning Directorate General, Forestry Ministry

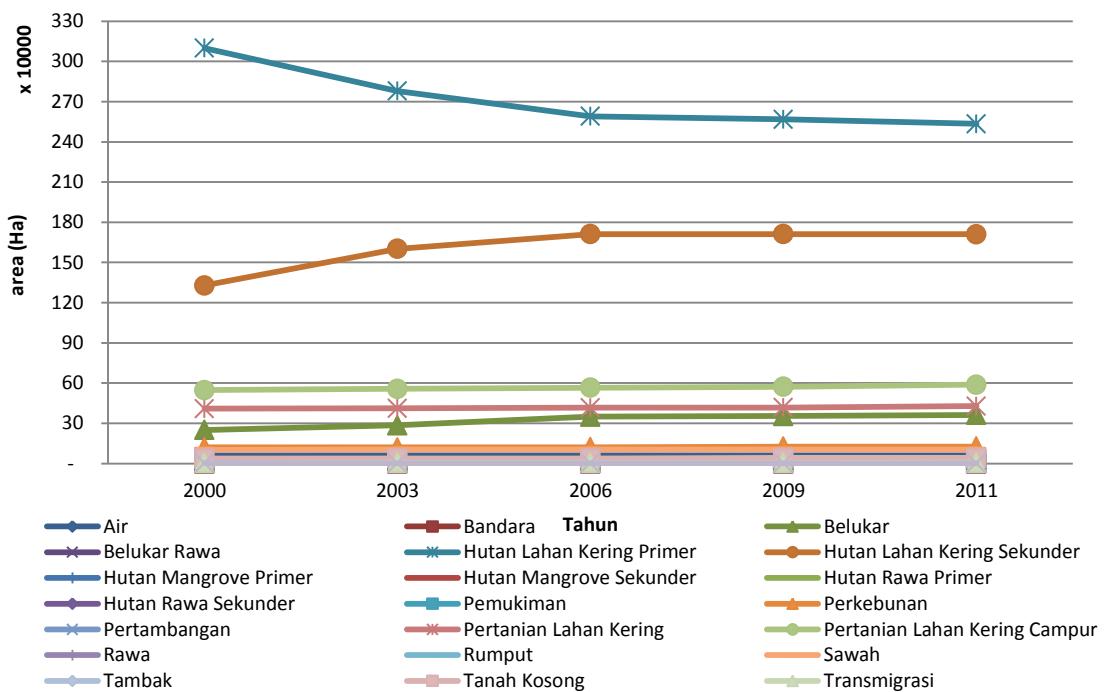


Figure 6 .1 Chart of Land Use and Land Cover Change of Central Sulawesi

Table 6.2 Landuse and land cover area of Central Sulawesi by distric/City and subdistrict

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
District of Banggai	919,481	919,481	919,481	919,481	919,481
Balantak Subdistrict	55,761	55,761	55,761	55,761	55,761
Water Body	68	68	68	68	68
Shrub	4,342	6,011	6,011	6,250	6,523
Primary Dryland Forest	29,418	24,533	23,483	23,425	4,984
Secondary Dryland Forest	7,455	10,655	11,419	10,366	28,534
Secondary Mangrove Forest	171	171	171	171	171
Settlement	283	283	283	283	283
Estate Crop	1,686	1,686	1,686	1,686	1,686
Dryland Agriculture	547	547	547	547	547
Mixed Dryland Agriculture	11,762	11,779	12,065	12,937	12,937
Swamp	10	10	10	10	10
Vacant Land	18	18	18	18	18
Batui Subdistrict	85,514	85,514	85,514	85,514	85,514

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Water Body	610	610	610	610	610
Shrub	17,322	17,491	17,491	17,491	17,920
Primary Dryland Forest	12,050	12,050	12,050	12,050	12,050
Secondary Dryland Forest	33,983	33,653	33,653	33,653	30,493
Secondary Mangrove Forest	1,563	1,563	1,563	1,563	1,563
Settlement	7	7	7	7	7
Estate Crop	5,127	5,127	5,127	5,127	5,127
Dryland Agriculture	4,563	4,563	4,563	4,563	4,695
Mixed Dryland Agriculture	8,184	8,184	8,184	8,184	10,782
Rice Field	1,393	1,393	1,555	1,555	1,555
Embankment	163	163	163	163	163
Vacant Land	549	712	549	549	549
Bualemo Subdistrict	83,449	83,449	83,449	83,449	83,449
Water Body	21	21	21	21	21
Shrub	7,578	15,269	15,252	15,080	15,080
Swamp shrub	260	260	260	260	233
Primary Dryland Forest	34,204	33,121	32,640	31,702	31,678
Secondary Dryland Forest	25,959	19,352	19,832	20,039	20,026
Primary Mangrove Forest	181	1	1	1	1
Secondary Mangrove Forest	2,031	2,211	2,211	2,211	2,211
Settlement	188	188	188	188	188
Dryland Agriculture	4,959	4,959	4,959	4,959	4,959
Mixed Dryland Agriculture	4,824	4,824	4,842	5,362	5,362
Swamp	57	57	57	57	57
Rice Field	869	869	869	869	895
Vacant Land	2,340	2,340	2,340	2,721	2,759
Bunta Subdistrict	72,731	72,731	72,731	72,731	72,731
Shrub	1,501	1,501	1,501	1,501	1,501
Primary Dryland Forest	36,256	35,245	35,055	34,668	34,668
Secondary Dryland Forest	18,495	19,507	19,415	18,654	18,654
Secondary Mangrove Forest	200	200	200	200	200
Settlement	103	103	103	103	103
Estate Crop	5,527	5,527	5,527	5,527	5,527
Dryland Agriculture	940	940	940	940	940
Mixed Dryland Agriculture	7,717	7,717	7,998	9,147	9,147
Rice Field	1,091	1,091	1,091	1,091	1,091

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Transmigration	900	900	900	900	900
Kintom Subdistrict	61,655	61,655	61,655	61,655	61,655
Waterbody	177	177	177	177	177
Shrub	5,677	5,677	5,677	5,677	5,789
Primary Dryland Forest	37,624	37,624	24,599	24,599	24,599
Secondary Dryland Forest	6,824	6,824	19,850	19,850	19,738
Secondary Mangrove Forest	205	205	205	205	205
Settlement	85	85	85	85	85
Estate Crop	77	77	77	77	77
Dryland Agriculture	2,348	2,348	2,348	2,348	2,348
Mixed Dryland Agriculture	8,637	8,637	8,637	8,637	8,637
Lamala Subdistrict	34,238	34,238	34,238	34,238	34,238
Shrub	798	798	798	798	798
Primary Dryland Forest	7,415	5,865	5,690	5,690	5,627
Secondary Dryland Forest	5,612	6,686	6,671	6,671	6,734
Secondary Mangrove Forest	163	163	163	163	163
Secondary Swamp Forest	386	386	386	386	386
Settlement	260	260	260	260	260
Estate Crop	2,041	2,041	2,041	2,041	2,041
Dryland Agriculture	302	302	302	302	302
Mixed Dryland Agriculture	16,778	17,254	17,445	17,445	17,445
Swamp	24	24	24	24	24
Rice Field	391	391	391	391	391
Vacant Land	68	68	68	68	68
Luwuk Subdistrict	51,633	51,633	51,633	51,633	51,633
Airport	41	41	41	41	41
Shrub	7,229	7,241	7,241	7,241	7,241
Primary Dryland Forest	19,645	19,645	19,645	19,645	19,645
Secondary Dryland Forest	7,740	7,727	7,604	7,574	7,201
Settlement	1,222	1,222	1,222	1,222	1,222
Dryland Agriculture	5,678	5,678	5,678	5,678	5,996
Mixed Dryland Agriculture	10,037	10,037	10,160	10,190	10,245
Vacant Land	41	41	41	41	41
Luwuk Timur Subdistrict	20,430	20,430	20,430	20,430	20,430
Shrub	759	759	759	759	759
Primary Dryland Forest	3,779	2,821	2,909	2,909	2,909

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Secondary Dryland Forest	2,433	3,265	2,745	2,452	2,452
Secondary Mangrove Forest	1,008	1,008	1,008	1,008	1,008
Settlement	16	16	16	16	16
Estate Crop	1,777	1,777	1,777	1,777	1,777
Dryland Agriculture	751	751	751	751	751
Mixed Dryland Agriculture	9,803	9,928	10,360	10,653	10,653
Rice Field	100	100	100	100	100
Vacant Land	4	4	4	4	4
Masama Subdistrict	21,757	21,757	21,757	21,757	21,757
Shrub	25	25	25	25	25
Primary Dryland Forest	7,980	7,774	6,935	6,782	6,782
Secondary Dryland Forest	2,913	3,118	3,958	4,111	4,111
Primary Mangrove Forest	164	164	0	0	0
Secondary Mangrove Forest	438	438	602	602	602
Secondary Swamp Forest	147	147	147	147	147
Settlement	2	2	2	2	2
Dryland Agriculture	792	792	792	792	792
Mixed Dryland Agriculture	6,996	6,996	6,996	6,996	6,996
Rice Field	2,301	2,301	2,301	2,301	2,301
Nuhon Subdistrict	136,717	136,717	136,717	136,717	136,717
Water Body	684	684	684	684	684
Shrub	7,082	7,133	7,904	8,058	10,346
Primary Dryland Forest	87,634	29,509	28,670	28,670	28,670
Secondary Dryland Forest	26,069	83,691	83,758	83,604	81,196
Primary Mangrove Forest	367	367	367	367	367
Secondary Mangrove Forest	55	55	55	55	55
Settlement	98	98	98	98	98
Estate Crop	3,387	3,387	3,387	3,387	3,387
Dryland Agriculture	5,550	5,729	5,729	5,729	5,729
Mixed Dryland Agriculture	3,280	3,552	3,552	3,552	3,673
Rice Field	303	303	303	303	303
Vacant land	2,065	2,065	2,065	2,065	2,065
Transmigration	145	145	145	145	145
Pagimana Subdistrict	146,520	146,520	146,520	146,520	146,520
Water Body	54	54	54	54	54
Shrub	5,919	5,899	5,947	5,958	5,958

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Primary Dryland Forest	94,213	93,155	92,178	92,173	92,148
Secondary Dryland Forest	37,014	38,037	37,755	37,744	37,393
Primary Mangrove Forest	543	543	530	530	530
Secondary Mangrove Forest	434	434	447	447	447
Settlement	494	494	494	494	494
Estate Crop	289	289	289	289	289
Dryland Agriculture	3,422	3,444	3,539	3,539	3,539
Mixed Dryland Agriculture	1,629	1,662	2,778	2,783	3,159
Rice Field	204	204	204	204	204
Vacant land	2,306	2,306	2,306	2,306	2,306
Toili Subdistrict	67,735	67,735	67,735	67,735	67,735
Water Body	701	701	701	701	701
Shrub	3,571	3,751	3,751	3,751	3,751
Primary Dryland Forest	25,159	7,039	6,961	7,251	7,251
Secondary Dryland Forest	20,811	38,741	38,659	38,370	36,577
Secondary Mangrove Forest	931	931	931	931	931
Settlement	82	82	82	82	82
Estate Crop	5,237	5,237	5,237	5,237	5,237
Dryland Agriculture	3,636	3,645	3,645	3,645	3,645
Mixed Dryland Agriculture	2,717	2,717	2,876	2,876	4,669
Rice Field	3,334	3,334	3,334	3,334	3,334
Vacant land	500	500	500	500	500
Transmigration	1,058	1,058	1,058	1,058	1,058
Toili Barat Subdistrict	81,320	81,320	81,320	81,320	81,320
Water Body	542	542	542	542	542
Shrub	7,853	7,853	7,853	7,853	8,168
Primary Dryland Forest	54,871	23,465	15,759	15,716	15,716
Secondary Dryland Forest	4,111	35,517	40,917	40,961	40,485
Secondary Mangrove Forest	2,007	2,007	2,007	2,007	2,007
Estate Crop	6,141	6,141	6,141	6,141	6,141
Dryland Agriculture	2,065	2,065	4,219	4,219	4,219
Mixed Dryland Agriculture	2,109	2,109	2,261	2,261	2,421
Rice Field	1,609	1,609	1,609	1,609	1,609
Vacant land	11	11	11	11	11
District Banggai Kepulauan	311,626	311,626	311,626	311,626	311,626
Banggai Subdistrict	9,625	9,625	9,625	9,625	9,625

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Water Body	2	2	2	2	2
Secondary Dryland Forest	8,021	8,021	8,021	8,021	8,021
Settlement	154	154	154	154	154
Dryland Agriculture	63	63	63	63	63
Mixed Dryland Agriculture	1,384	1,384	1,384	1,384	1,384
Banggai Selatan Subdistrict	8,743	8,743	8,743	8,743	8,743
Secondary Dryland Forest	8,385	8,385	8,385	8,385	8,385
Secondary Mangrove Forest	52	52	52	52	52
Settlement	33	33	33	33	33
Mixed Dryland Agriculture	273	273	273	273	273
Banggai Tengah Subdistrict	5,359	5,359	5,359	5,359	5,359
Primary Dryland Forest	4	4	4	4	4
Secondary Dryland Forest	4,999	4,999	4,999	4,999	4,999
Secondary Mangrove Forest	13	13	13	13	13
Dryland Agriculture	57	57	57	57	57
Mixed Dryland Agriculture	287	287	287	287	287
Banggai Utara Subdistrict	4,370	4,370	4,370	4,370	4,370
Water Body	3	3	3	3	3
Secondary Dryland Forest	2,648	2,648	2,648	2,648	2,648
Primary Mangrove Forest	106	106	106	106	106
Secondary Mangrove Forest	145	145	145	145	145
Settlement	51	51	51	51	51
Dryland Agriculture	19	19	19	19	19
Mixed Dryland Agriculture	1,398	1,398	1,398	1,398	1,398
Bangkurung	13,297	13,297	13,297	13,297	13,297
Water Body	27	27	27	27	27
Primary Dryland Forest	68	68	68	68	68
Secondary Dryland Forest	6,720	6,720	6,720	6,720	6,720
Primary Mangrove Forest	1,356	1,356	1,356	1,356	1,356
Secondary Mangrove Forest	327	327	327	327	327
Settlement	89	89	89	89	89
Dryland Agriculture	895	895	895	895	895
Mixed Dryland Agriculture	3,731	3,731	3,731	3,731	3,731
Vacant land	85	85	85	85	85
Bokan Kepulauan Subdistrict	24,119	24,119	24,119	24,119	24,119
Water Body	742	1,058	742	742	742

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Shrub	1,110	1,110	1,110	1,110	1,110
Primary Dryland Forest	3	3	3	3	3
Secondary Dryland Forest	9,596	9,596	9,596	9,596	9,596
Primary Mangrove Forest	2,227	2,227	1,865	1,865	1,865
Secondary Mangrove Forest	2,824	2,824	3,186	3,186	3,186
Settlement	172	172	172	172	172
Dryland Agriculture	1,533	1,533	1,533	1,533	1,533
Mixed Dryland Agriculture	5,597	5,597	5,597	5,597	5,597
Swamp	315		315	315	315
Buko Subdistrict	21,185	21,185	21,185	21,185	21,185
Shrub	623	623	623	623	623
Primary Dryland Forest	2,233	2,233	2,233	2,233	2,233
Secondary Dryland Forest	4,498	4,498	4,498	4,498	4,498
Primary Mangrove Forest	121	121	121	121	121
Settlement	142	142	142	142	142
Dryland Agriculture	355	355	355	355	355
Mixed Dryland Agriculture	13,213	13,213	13,213	13,213	13,213
Buko Selatan Subdistrict	21,007	21,007	21,007	21,007	21,007
Shrub	5	5	154	154	154
Secondary Dryland Forest	397	397	397	397	397
Secondary Mangrove Forest	751	751	751	751	751
Settlement	40	40	40	40	40
Dryland Agriculture	1,296	1,296	1,147	1,147	1,147
Mixed Dryland Agriculture	18,518	18,518	18,518	18,518	18,518
Bulagi Subdistrict	29,780	29,780	29,780	29,780	29,780
Water Body	5	5	5	5	5
Shrub	63	63	63	63	63
Primary Dryland Forest	12,966	12,966	12,966	11,853	11,853
Secondary Dryland Forest	619	619	619	1,732	1,732
Secondary Mangrove Forest	1	1	1	1	1
Settlement	57	57	57	57	57
Dryland Agriculture	2,184	2,184	2,184	2,184	2,184
Mixed Dryland Agriculture	13,884	13,884	13,884	13,884	13,884
Bulagi Selatan Subdistrict	24,654	24,654	24,654	24,654	24,654
Primary Dryland Forest	4,040	4,040	4,040	4,040	4,040
Secondary Dryland Forest	1,487	1,487	1,487	1,487	1,487

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Settlement	19	19	19	19	19
Dryland Agriculture	7,503	7,503	7,503	7,503	7,503
Mixed Dryland Agriculture	11,605	11,605	11,605	11,605	11,605
Bulagi Utara Subdistrict	36,647	36,647	36,647	36,647	36,647
Water Body	7	7	7	7	7
Shrub	665	665	665	665	665
Primary Dryland Forest	10,744	10,744	10,744	10,744	10,744
Secondary Dryland Forest	5,251	5,251	4,546	4,546	4,546
Primary Mangrove Forest	207	207	712	712	712
Secondary Mangrove Forest	505	505	116	116	116
Settlement	116	116	390	390	390
Dryland Agriculture	390	390	19,468	19,468	19,468
Mixed Dryland Agriculture	18,764	18,764			
Labobo Subdistrict	7,386	7,386	7,386	7,386	7,386
Water Body	79	79	79	79	79
Primary Dryland Forest	1	1	1	1	1
Secondary Dryland Forest	4,654	4,654	4,654	4,654	4,654
Primary Mangrove Forest	299	299	299	299	299
Secondary Mangrove Forest	308	308	308	308	308
Settlement	107	107	107	107	107
Mixed Dryland Agriculture	1,938	1,938	1,938	1,938	1,938
Liang Subdistrict	13,639	13,639	13,639	13,639	13,639
Shrub	4,352	4,352	4,352	4,352	4,352
Primary Dryland Forest	9	9	9	9	9
Secondary Dryland Forest	257	257	257	257	257
Secondary Mangrove Forest	33	33	33	33	33
Settlement	27	27	27	27	27
Dryland Agriculture	374	374	374	374	374
Mixed Dryland Agriculture	8,587	8,587	8,587	8,587	8,587
Peling Tengah Subdistrict	11,967	11,967	11,967	11,967	11,967
Shrub	347	347	347	347	347
Secondary Dryland Forest	121	121	121	121	121
Secondary Mangrove Forest	78	78	78	78	78
Settlement	9	9	9	9	9
Dryland Agriculture	73	73	73	73	73
Mixed Dryland Agriculture	11,338	11,338	11,338	11,338	11,338

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Tinangkung Subdistrict	20,187	20,187	20,187	20,187	20,187
Primary Dryland Forest	690	690	690	690	690
Secondary Dryland Forest	1,873	1,873	1,873	1,873	1,827
Primary Mangrove Forest	54	54	0	0	0
Secondary Mangrove Forest	20	20	74	74	74
Settlement	102	102	102	102	102
Dryland Agriculture	806	806	806	806	852
Mixed Dryland Agriculture	16,643	16,643	16,643	16,643	16,643
Tinangkung Selatan Subdistrict	16,732	16,732	16,732	16,732	16,732
Shrub	20	20	20	20	20
Secondary Dryland Forest	22	22	22	22	22
Secondary Mangrove Forest	573	573	573	573	573
Settlement	11	11	11	11	11
Estate Crop	965	965	965	965	965
Dryland Agriculture	423	423	423	423	423
Mixed Dryland Agriculture	14,718	14,718	14,718	14,718	14,718
Tinangkung Utara Subdistrict	15,511	15,511	15,511	15,511	15,511
Water body	2	2	2	2	2
Secondary Dryland Forest	6	6	6	6	6
Secondary Mangrove Forest	123	123	123	123	123
Settlement	92	92	92	92	92
Mixed Dryland Agriculture	15,288	15,288	15,288	15,288	15,288
Totikum Subdistrict	20,416	20,416	20,416	20,416	20,416
Water body	2	2	2	2	2
Settlement	190	190	190	190	190
Dryland Agriculture	1,387	1,387	1,387	1,387	1,387
Mixed Dryland Agriculture	18,837	18,837	18,837	18,837	18,837
Totikum Selatan Subdistrict	7,002	7,002	7,002	7,002	7,002
Water body	141	141	141	141	141
Shrub	1	1	1	1	1
Secondary Dryland Forest	236	236	236	236	236
Secondary Mangrove Forest	20	20	20	20	20
Settlement	37	37	37	37	37
Dryland Agriculture	4,199	4,199	4,199	4,199	4,199
Mixed Dryland Agriculture	2,367	2,367	2,367	2,367	2,367
District Buol	382,821	382,821	382,821	382,821	382,821

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Biau Subdistrict	27,016	27,016	27,016	27,016	27,016
Shrub	1,060	1,146	1,146	1,146	1,146
Secondary Dryland Forest	12,932	11,857	11,049	11,049	11,049
Secondary Mangrove Forest	8,714	9,703	10,511	10,511	10,511
Settlement	247	247	247	247	247
Dryland Agriculture	794	794	794	794	794
Mixed Dryland Agriculture	2,968	2,968	2,968	2,968	2,968
Rice Field	301	301	301	301	301
Bokat Subdistrict	18,758	18,758	18,758	18,758	18,758
Water body	80	80	80	80	80
Shrub	892	1,715	1,800	1,800	1,800
Primary Dryland Forest	7,902	7,186	6,996	6,996	6,996
Secondary Dryland Forest	6,880	6,772	6,879	6,879	6,879
Primary Mangrove Forest	60	43	43	43	43
Settlement	17	17	17	17	17
Estate Crop	309	309	309	309	309
Dryland Agriculture	128	128	128	128	128
Mixed Dryland Agriculture	111	111	111	111	111
Rice Field	1,422	1,422	1,422	1,422	1,422
No data	974	974	974	974	974
Bukal Subdistrict	50,012	50,012	50,012	50,012	50,012
Shrub	1,652	2,081	3,336	3,336	3,755
Primary Dryland Forest	32,350	30,991	19,953	19,953	19,101
Secondary Dryland Forest	2,867	3,798	13,581	13,581	14,014
Settlement	57	57	57	57	57
Estate Crop	11,438	11,438	11,438	11,438	11,438
Dryland Agriculture	738	738	738	738	738
Mixed Dryland Agriculture	861	861	861	861	861
Rice Field	48	48	48	48	48
Bunobogu Subdistrict	28,901	28,901	28,901	28,901	28,901
Water body	13	13	13	13	13
Shrub	306	545	646	646	646
Primary Dryland Forest	21,661	21,356	20,170	20,170	20,170
Secondary Dryland Forest	3,049	3,115	4,200	4,200	4,200
Primary Mangrove Forest	589	589	589	589	589
Settlement	69	69	69	69	69

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Dryland Agriculture	2,950	2,950	2,950	2,950	2,950
Mixed Dryland Agriculture	146	146	146	146	146
Rice Field	69	69	69	69	69
Embankment	49	49	49	49	49
Gadung Subdistrict	20,638	20,638	20,638	20,638	20,638
Water body	58	58	58	58	58
Shrub	178	178	178	178	178
Primary Dryland Forest	14,319	14,319	14,186	14,186	14,186
Secondary Dryland Forest	443	443	576	576	576
Hutan Mangrove Primer	57	57	57	57	57
Settlement	65	65	65	65	65
Dryland Agriculture	5,471	5,471	5,471	5,471	5,471
Embankment	48	48	48	48	48
Keramat Subdistrict	13,136	13,136	13,136	13,136	13,136
Shrub	947	947	1,581	1,581	1,581
Primary Dryland Forest	2,136	2,136	4	4	4
Secondary Dryland Forest	6,313	6,191	7,689	7,689	7,689
Hutan Mangrove Primer	75	75	75	75	75
Settlement	123	123	123	123	123
Dryland Agriculture	1,807	1,807	1,807	1,807	1,807
Mixed Dryland Agriculture	1,735	1,857	1,857	1,857	1,857
Lipunoto Subdistrict	16,269	16,269	16,269	16,269	16,269
Water body	88	88	88	88	88
Shrub	456	549	1,302	1,302	1,302
Primary Dryland Forest	6,097	5,471	1,197	1,197	1,197
Secondary Dryland Forest	3,922	4,054	7,576	7,576	7,576
Secondary Swamp Forest	642	642	642	642	642
Settlement	314	314	314	314	314
Estate Crop	54	54	54	54	54
Dryland Agriculture	3,823	3,823	3,823	3,823	3,823
Mixed Dryland Agriculture	395	796	796	796	796
Rice Field	478	478	478	478	478
Momunu Subdistrict	21,410	21,410	21,410	21,410	21,410
Water body	272	272	272	272	272
Shrub	170	170	2,066	2,066	2,066
Primary Dryland Forest	4,110	3,462	754	754	754
Secondary Dryland Forest	2,523	3,038	3,851	3,851	3,851

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Settlement	108	108	108	108	108
Estate Crop	6,718	6,718	6,718	6,718	6,718
Dryland Agriculture	2,165	2,165	2,165	2,165	2,165
Mixed Dryland Agriculture	4,725	4,858	4,858	4,858	4,858
Rice Field	619	619	619	619	619
Paleleh Subdistrict	19,877	19,877	19,877	19,877	19,877
Water body	34	34	34	34	34
Shrub	714	728	953	953	953
Primary Dryland Forest	3,651	3,651	3,651	3,651	3,651
Secondary Dryland Forest	9,132	9,132	8,848	8,848	8,848
Primary Mangrove Forest	44	44	44	44	44
Secondary Mangrove Forest	24	24	24	24	24
Setllement	76	76	76	76	76
Estate Crop	568	568	568	568	568
Dryland Agriculture	1,690	1,676	1,736	1,736	1,736
Mixed Dryland Agriculture	3,687	3,687	3,687	3,687	3,687
Rice Field	256	256	256	256	256
Paleleh Barat Subdistrict	13,976	13,976	13,976	13,976	13,976
Water body	20	20	20	20	20
Shrub	448	448	448	448	448
Primary Dryland Forest	7,887	7,887	7,887	7,887	7,887
Secondary Dryland Forest	478	478	478	478	478
Setllement	68	68	68	68	68
Estate Crop	463	463	463	463	463
Dryland Agriculture	3,170	3,170	3,170	3,170	3,170
Mixed Dryland Agriculture	1,405	1,405	1,405	1,405	1,405
Rice Field	38	38	38	38	38
Tiloan Subdistrict	152,827	152,827	152,827	152,827	152,827
Water body	285	285	285	285	285
Shrub	371	371	1,157	1,157	1,157
Primary Dryland Forest	135,031	129,586	119,427	119,427	119,292
Secondary Dryland Forest	7,660	13,105	22,477	22,477	22,612
Estate Crop	6,857	6,857	6,857	6,857	6,857
Dryland Agriculture	16	16	16	16	16
Mixed Dryland Agriculture	2,259	2,259	2,259	2,259	2,259
Rice Field	349	349	349	349	349

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
District Donggala	498,982	498,982	498,982	498,982	498,982
Balaseang Subdistrict	46,810	46,810	46,810	46,810	46,810
Water body	366	366	366	366	366
Shrub	364	364	364	459	459
Swamp Shrub	0	0	0	22	22
Primary Dryland Forest	19,287	19,142	18,978	18,978	18,978
Secondary Dryland Forest	24,538	24,683	24,847	24,463	24,463
Primary Mangrove Forest	125	125	125	125	125
Secondary MangroveForest	155	155	155	134	134
Setllement	843	843	843	843	843
Dryland Agriculture	473	473	473	473	473
Mixed Dryland Agriculture	146	146	146	146	146
Rice Field	512	512	512	801	801
Banawa Subdistrict	10,412	10,412	10,412	10,412	10,412
Shrub	2,223	2,223	2,223	2,342	2,342
Primary Dryland Forest	175	175	175	175	175
Secondary Dryland Forest	4,498	4,498	4,498	4,380	4,380
Secondary MangroveForest	19	19	19	19	19
Setllement	306	306	306	306	306
Dryland Agriculture	2,451	2,451	2,451	2,451	2,451
Mixed Dryland Agriculture	738	738	738	738	738
Banawa Selatan Subdistrict	48,484	48,484	48,484	48,484	48,484
Water body	547	547	547	547	547
Shrub	0	696	696	716	716
Primary Dryland Forest	11,824	9,451	6,050	6,050	6,050
Secondary Dryland Forest	30,827	32,415	35,816	35,796	35,796
Primary Mangrove Forest	55	55	0	0	0
Secondary MangroveForest	46	46	102	102	102
Setllement	136	136	136	136	136
Estate Crop	1,637	1,637	1,637	1,637	1,637
Dryland Agriculture	4	92	92	92	92
Mixed Dryland Agriculture	1,839	1,839	1,839	1,839	1,839
Swamp	48	48	48	48	48
Rice Field	741	741	741	741	741
Embankment	780	780	780	780	780
Banawa Tengah Subdistrict	6,289	6,289	6,289	6,289	6,289

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Water body	9	9	9	9	9
Shrub	2	2	2	2	2
Primary Dryland Forest	523	523	523	523	523
Secondary Dryland Forest	4,178	4,178	4,178	4,178	4,178
Settlement	98	98	98	98	98
Estate Crop	209	209	209	209	209
Dryland Agriculture	1,052	1,052	1,052	1,052	1,052
Mixed Dryland Agriculture	219	219	219	219	219
Dampelas Sojol Subdistrict	56,738	56,738	56,738	56,738	56,738
Water body	717	717	717	717	717
Shrub	2,216	2,225	2,277	2,428	2,268
Primary Dryland Forest	21,954	21,954	20,676	20,676	20,649
Secondary Dryland Forest	10,902	10,893	12,119	11,756	11,563
Primary Mangrove Forest	58	58	58	58	58
Secondary MangroveForest	43	43	43	43	43
Settlement	570	570	570	570	570
Estate Crop	685	685	685	685	685
Dryland Agriculture	14,481	14,481	14,481	14,596	14,846
Mixed Dryland Agriculture	2,395	2,395	2,395	2,421	2,540
Rice Field	2,536	2,536	2,536	2,605	2,617
Embankment	31	31	31	31	31
Transmigration	152	152	152	152	152
Labuan Subdistrict	13,037	13,037	13,037	13,037	13,037
Water body	167	167	167	167	167
Shrub	0	159	1,604	1,604	1,604
Primary Dryland Forest	7,554	7,482	7,482	7,482	7,482
Secondary Dryland Forest	2,895	2,809	1,364	1,364	1,364
Settlement	202	202	202	202	202
Dryland Agriculture	1,775	1,775	1,775	1,775	1,775
Mixed Dryland Agriculture	1	1	1	1	1
Rice Field	228	228	228	228	228
Vacant land	215	215	215	215	215
Pinembani Subdistrict	48,595	48,595	48,595	48,595	48,595
Shrub	630	1,252	1,252	1,288	1,288
Primary Dryland Forest	40,783	40,783	27,275	27,275	27,275
Secondary Dryland Forest	7,183	6,561	20,069	20,032	20,032

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Rio Pakava Subdistrict	85,606	85,606	85,606	85,606	85,606
Water body	351	351	351	351	351
Shrub	1,238	1,238	1,353	1,422	1,513
Primary Dryland Forest	67,989	67,989	45,234	45,208	45,208
Secondary Dryland Forest	2,101	2,101	24,741	24,699	24,607
Estate crop	3,464	3,464	3,464	3,464	3,464
Dryland Agriculture	9,187	9,187	9,187	9,187	9,187
Mixed Dryland Agriculture	1,270	1,270	1,270	1,270	1,270
Rice Field	6	6	6	6	6
Sindue Subdistrict	9,151	9,151	9,151	9,151	9,151
Water body	103	103	103	103	103
Shrub	154	183	2,098	2,098	2,098
Primary Dryland Forest	652	652	652	652	652
Secondary Dryland Forest	5,784	5,755	3,839	3,839	3,839
Settlement	188	188	188	188	188
Dryland Agriculture	2,031	2,031	2,031	2,031	2,031
Rice Field	239	239	239	239	239
Sindue Tobata Subdistrict	25,697	25,697	25,697	25,697	25,697
Water body	174	174	174	174	174
Shrub	0	0	518	518	518
Primary Dryland Forest	20,041	20,041	20,041	20,041	20,041
Secondary Dryland Forest	5,071	5,071	4,553	4,553	4,553
Settlement	185	185	185	185	185
Dryland Agriculture	136	136	136	136	136
Mixed Dryland Agriculture	91	91	91	91	91
Sindue Tombusabora Subdistrict	10,928	10,928	10,928	10,928	10,928
Water body	42	42	42	42	42
Shrub	65	65	1,319	1,319	1,319
Primary Dryland Forest	5,985	5,985	5,985	5,985	5,985
Secondary Dryland Forest	4,155	4,155	2,901	2,901	2,901
Settlement	51	51	51	51	51
Dryland Agriculture	630	630	630	630	630
Sirenja Subdistrict	29,299	29,299	29,299	29,299	29,299
Water body	214	214	214	214	214
Shrub	423	869	869	869	869
Primary Dryland Forest	19,036	19,036	19,036	19,036	19,036

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Secondary Dryland Forest	7,044	6,598	6,598	6,506	6,439
Settlement	391	391	391	391	391
Dryland Agriculture	841	841	841	933	983
Mixed Dryland Agriculture	180	180	180	180	180
Rice Field	1,171	1,171	1,171	1,171	1,188
Sojol Subdistrict	65,376	65,376	65,376	65,376	65,376
Water body	256	256	256	256	256
Shrub	2,193	2,122	2,418	2,127	2,347
Primary Dryland Forest	41,557	36,355	33,376	33,376	29,792
Secondary Dryland Forest	5,178	10,314	12,668	12,380	12,686
Primary Mangrove Forest	308	308	308	308	308
Secondary MangroveForest	61	61	61	61	53
Settlement	412	412	412	412	413
Estate Crop	2,467	2,467	2,467	2,467	2,467
Dryland Agriculture	6,072	6,072	6,072	5,984	6,273
Mixed Dryland Agriculture	4,636	4,827	5,156	5,365	8,135
Rice Field	1,676	1,676	1,676	2,132	2,132
Embankment	507	507	507	507	515
No Data	54	0	0	0	0
Sojol Utara Subdistrict	15,052	15,052	15,052	15,052	15,052
Water body	18	18	18	18	18
Shrub	799	882	956	887	887
Primary Dryland Forest	5,006	4,681	3,368	3,368	3,368
Secondary Dryland Forest	6,231	6,473	7,712	7,712	7,040
Primary Mangrove Forest	23	23	23	23	23
Settlement	138	138	138	138	138
Dryland Agriculture	1,821	1,821	1,821	1,973	1,973
Mixed Dryland Agriculture	244	244	244	244	917
Rice Field	752	752	752	669	669
Embankment	20	20	20	20	20
Tana Tovea Subdistrict	27,509	27,509	27,509	27,509	27,509
Water body	220	220	220	220	220
Shrub	2,316	2,316	2,691	2,691	2,691
Primary Dryland Forest	20,157	18,387	16,604	16,604	16,441
Secondary Dryland Forest	2,376	4,146	5,554	5,554	5,716
Setllement	35	35	35	35	35

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Mining	571	571	571	571	571
Dryland Agriculture	1,421	1,421	1,421	1,421	1,421
Mixed Dryland Agriculture	412	412	412	412	412
District Morowali	1,309,424	1,309,424	1,309,424	1,309,424	1,309,424
Bahodopi Subdistrict	81,456	81,456	81,456	81,456	81,456
Water body	94	94	94	94	94
Shrub	74	95	118	97	218
Primary Dryland Forest	69,801	69,795	69,767	69,630	68,664
Secondary Dryland Forest	6,079	6,059	6,055	6,192	6,933
Primary Mangrove Forest	203	203	203	203	203
Secondary Mangrove Forest	35	35	35	35	35
Settlement	13	13	13	13	13
Mining	0	0	0	0	8
Dryland Agriculture	1,740	1,740	1,755	1,755	1,755
Mixed Dryland Agriculture	2,935	2,935	2,935	2,935	2,935
Rice Field	367	367	367	367	367
Vacant land	113	120	113	134	230
Bumi Raya Subdistrict	12,667	12,667	12,667	12,667	12,667
Water body	211	211	211	211	211
Shrub	1,042	1,042	1,042	1,042	1,042
Secondary Dryland Forest	402	217	217	217	217
Primary Mangrove Forest	450	450	450	450	450
Secondary Mangrove Forest	1,361	1,361	1,361	1,361	1,361
Settlement	544	544	544	544	544
Estate Crop	3,803	3,803	3,803	3,803	3,803
Dryland Agriculture	45	45	45	45	45
Mixed Dryland Agriculture	4,519	4,704	4,704	4,704	4,704
Rice Field	290	290	290	290	290
Bungku Barat Subdistrict	80,127	80,127	80,127	80,127	80,127
Water body	54	54	54	54	54
Shrub	3,358	3,555	3,788	4,061	3,936
Primary Dryland Forest	57,494	57,299	55,922	54,374	52,841
Secondary Dryland Forest	5,935	5,458	6,083	6,700	8,215
Settlement	178	178	178	178	178
Estate Crop	1,607	1,607	1,607	1,607	1,607
Dryland Agriculture	714	714	714	714	920

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Mixed Dryland Agriculture	10,157	10,632	11,151	11,622	11,747
Rice Field	631	631	631	631	631
Vacant land	0	0	0	187	0
Bungku Selatan Subdistrict	52,613	52,613	52,613	52,613	52,613
Shrub	1,866	1,866	1,866	2,202	2,564
Primary Dryland Forest	39,258	38,837	36,479	36,270	34,336
Secondary Dryland Forest	4,844	5,299	7,868	7,522	7,162
Primary Mangrove Forest	981	981	981	981	981
Secondary Mangrove Forest	1,151	1,151	1,151	1,151	1,151
Settlement	169	169	169	169	169
Dryland Agriculture	909	909	909	909	909
Mixed Dryland Agriculture	3,420	3,386	3,123	3,395	5,275
Vacant land	15	15	66	15	66
Bungku Tengah Subdistrict	127,571	127,571	127,571	127,571	127,571
Water body	23	23	23	23	23
Shrub	579	672	750	821	924
Primary Dryland Forest	86,032	86,023	85,265	84,048	84,021
Secondary Dryland Forest	22,376	21,292	21,528	21,956	21,879
Primary Mangrove Forest	488	488	488	488	488
Settlement	397	397	397	397	397
Dryland Agriculture	3,175	4,134	4,134	4,134	4,134
Mixed Dryland Agriculture	13,266	13,298	13,741	14,459	14,459
Rice Field	1,200	1,200	1,200	1,200	1,200
Vacant land	7	16	16	16	16
Transmigration	29	29	29	29	29
Bungku Utara Subdistrict	230,773	230,773	230,773	230,773	230,773
Water body	1,531	1,531	1,531	1,531	1,531
Shrub	9,091	9,103	9,143	9,773	9,773
Primary Dryland Forest	164,622	149,907	146,820	146,820	146,801
Secondary Dryland Forest	23,126	37,830	40,820	40,190	40,139
Primary Mangrove Forest	4,432	4,432	4,432	4,432	4,432
Secondary Mangrove Forest	315	315	315	315	315
Settlement	190	190	190	190	190
Estate Crop	9,984	9,984	9,984	9,984	9,984
Dryland Agriculture	11,615	11,615	11,615	11,615	11,615
Mixed Dryland Agriculture	5,567	5,567	5,567	5,567	5,567

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Rice Field	297	297	297	297	297
Vacant land	3	3	59	59	129
Lembo Subdistrict	106,053	106,053	106,053	106,053	106,053
Water body	375	375	375	375	375
Shrub	3,789	3,789	3,789	3,791	3,791
Primary Dryland Forest	59,547	58,118	56,638	56,496	56,496
Secondary Dryland Forest	17,989	19,417	20,285	18,805	18,444
Estate Crop	2,557	2,557	2,557	4,035	4,035
Dryland Agriculture	14,115	14,115	14,115	14,257	14,592
Mixed Dryland Agriculture	5,921	5,921	6,533	6,533	6,560
Rice Field	1,760	1,760	1,760	1,760	1,760
Mamo Salato Subdistrict	118,622	118,622	118,622	118,622	118,622
Water body	665	665	665	665	665
Shrub	6,160	6,160	8,036	8,709	8,709
Primary Dryland Forest	72,306	38,544	32,236	32,236	32,236
Secondary Dryland Forest	19,466	52,970	57,401	56,729	56,729
Primary Mangrove Forest	136	136	136	136	136
Secondary Mangrove Forest	427	427	427	427	427
Dryland Agriculture	9,448	9,451	9,451	9,451	9,451
Mixed Dryland Agriculture	6,970	7,225	7,225	7,225	7,225
Rice Field	479	479	479	479	479
(blank)	2,565	2,565	2,565	2,565	2,565
Menui Kepulauan Subdistrict	7,287	7,287	7,287	7,287	7,287
Water body	15	15	15	15	15
Shrub	0	1	1	1	1
Primary Dryland Forest	7,016	7,015	7,015	7,015	6,905
Secondary Dryland Forest	0	0	0	0	67
Primary Mangrove Forest	115	115	115	115	115
Settlement	2	2	2	2	2
Mixed Dryland Agriculture	138	138	138	138	181
Mori Atas Subdistrict	198,036	198,036	198,036	198,036	198,036
Water body	215	215	215	215	215
Shrub	8,103	8,193	13,695	13,761	15,664
Primary Dryland Forest	13,043	12,752	12,140	11,160	10,892
Secondary Dryland Forest	121,782	121,254	116,353	117,268	110,611
Settlement	1,015	1,015	1,015	1,015	1,068

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Mining	0	596	596	596	596
Dryland Agriculture	15,532	15,532	15,532	15,532	20,356
Mixed Dryland Agriculture	8,809	8,809	8,809	8,809	8,809
Grassland	26,200	26,200	26,200	26,200	26,200
Rice Field	2,081	2,081	2,081	2,081	2,081
Vacant land	1,255	1,389	1,400	1,400	1,509
Transmigration	0	0	0	0	36
Petasia Subdistrict	110,769	110,769	110,769	110,769	110,769
Water body	1,319	1,319	1,319	1,319	1,319
Shrub	11,081	11,924	11,140	11,048	11,096
Swamp Shrub	330	330	330	330	330
Primary Dryland Forest	52,441	50,247	37,861	37,827	36,445
Secondary Dryland Forest	20,777	22,128	34,515	28,604	29,593
Primary Mangrove Forest	104	104	104	104	104
Secondary Mangrove Forest	2,120	2,120	2,120	2,120	2,120
Primary Swamp Forest	325	325	325	325	325
Secondary Swamp Forest	884	884	884	884	884
Settlement	373	373	373	373	373
Estate Crop	1,226	1,226	2,010	5,883	6,098
Dryland Agriculture	5,513	5,513	5,513	5,587	5,587
Mixed Dryland Agriculture	11,282	11,282	11,282	10,433	10,564
Grassland	1,375	1,375	1,375	1,375	1,375
Rice Field	1,617	1,617	1,617	1,617	1,617
Vacant land	0	0	0	2,938	2,938
Soyo Jaya Subdistrict	120,957	120,957	120,957	120,957	120,957
Water body	332	332	332	332	332
Shrub	2,074	4,232	7,850	8,496	8,496
Primary Dryland Forest	93,889	89,866	87,301	87,301	87,301
Secondary Dryland Forest	13,479	15,343	14,272	12,834	12,337
Primary Mangrove Forest	1,262	1,262	1,262	1,262	1,262
Settlement	247	247	247	247	247
Dryland Agriculture	3,179	3,179	3,179	3,179	3,179
Mixed Dryland Agriculture	1,833	1,833	1,852	2,643	3,141
Grassland	649	649	649	649	649
Rice Field	4,013	4,013	4,013	4,013	4,013
Wita Ponda Subdistrict	62,494	62,494	62,494	62,494	62,494

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Shrub	344	403	904	904	904
Primary Dryland Forest	46,910	45,688	45,437	44,276	44,276
Secondary Dryland Forest	4,090	5,237	5,001	6,161	6,162
Primary Mangrove Forest	9	9	9	9	9
Secondary Mangrove Forest	1,088	1,088	1,088	1,088	1,088
Settlement	21	21	21	21	21
Estate Crop	6,497	6,512	6,512	6,512	6,512
Dryland Agriculture	2,416	2,416	2,416	2,416	2,416
Mixed Dryland Agriculture	1,104	1,107	1,107	1,107	1,107
Vacant land	16	13	0	0	0
District Parigi Moutong	608,370	608,370	608,370	608,370	608,370
Ampibabo Subdistrict	24,045	24,045	24,045	24,045	24,045
Shrub	582	582	1,010	1,010	1,010
Primary Dryland Forest	7,114	7,114	7,114	7,114	7,114
Secondary Dryland Forest	11,106	11,106	11,106	11,106	11,106
Primary Mangrove Forest	26	26	26	26	26
Secondary Mangrove Forest	22	22	22	22	22
Settlement	395	395	395	395	395
Mixed Dryland Agriculture	4,800	4,800	4,372	4,372	4,372
Balinggi Subdistrict	34,235	34,235	34,235	34,235	34,235
Water body	30	30	30	30	30
Shrub	246	246	561	561	785
Primary Dryland Forest	15,316	15,286	15,286	15,286	15,286
Secondary Dryland Forest	3,639	3,669	3,354	3,354	3,130
Primary Mangrove Forest	225	225	61	61	61
Secondary Mangrove Forest	20	20	184	184	184
Mixed Dryland Agriculture	6,111	6,111	6,111	6,111	6,111
Rice Field	8,419	8,419	8,419	8,419	8,419
Embankment	228	228	228	228	228
Transmigration	1	1	1	1	1
Bolano Lambunu Subdistrict	68,965	68,965	68,965	68,965	68,965
Water body	299	299	299	299	299
Shrub	8,867	10,641	10,641	10,641	10,641
Swamp Shrub	123	123	123	123	123
Primary Dryland Forest	23,187	23,187	22,954	15,466	15,466
Secondary Dryland Forest	6,948	5,051	5,283	12,539	12,539

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Primary Mangrove Forest	918	918	918	918	918
Secondary Mangrove Forest	938	938	938	938	938
Settlement	442	442	442	442	442
Estate Crop	3,305	3,305	3,305	3,305	3,305
Dryland Agriculture	5,367	5,489	5,489	5,489	5,489
Mixed Dryland Agriculture	8,783	8,783	8,783	9,016	9,016
Swamp	66	66	66	66	66
Rice Field	8,014	8,014	8,014	8,014	8,014
Embankment	307	307	307	307	307
Vacant land	8	8	8	8	8
Transmigration	1,393	1,393	1,393	1,393	1,393
Kasimbar Subdistrict	24,227	24,227	24,227	24,227	24,227
Water body	81	81	81	81	81
Shrub	273	273	273	273	273
Primary Dryland Forest	10,258	10,258	10,258	10,258	10,258
Secondary Dryland Forest	9,178	9,178	9,178	9,178	9,178
Primary Mangrove Forest	7	7	7	7	7
Secondary Mangrove Forest	28	28	28	28	28
Settlement	241	241	241	241	241
Dryland Agriculture	1,770	1,770	1,770	1,770	1,770
Mixed Dryland Agriculture	1,581	1,362	1,362	1,362	1,362
Rice Field	810	1,029	1,029	1,029	1,029
Mepanga Subdistrict	6,641	6,641	6,641	6,641	6,641
Shrub	2,293	2,293	2,402	2,402	2,402
Primary Dryland Forest	1,547	1,547	1,547	1,547	1,547
Secondary Dryland Forest	1,265	1,265	1,156	1,156	1,156
Secondary Mangrove Forest	49	49	49	49	49
Settlement	102	102	102	102	102
Estate crop	1,092	1,092	1,092	1,092	1,092
Dryland Agriculture	13	13	13	13	13
Mixed Dryland Agriculture	17	17	17	17	17
Rice Field	263	263	263	263	263
Moutong Subdistrict	67,976	67,976	67,976	67,976	67,976
Water body	186	186	186	186	186
Shrub	349	2,355	2,355	2,355	2,355
Primary Dryland Forest	41,381	29,740	29,740	29,740	29,740

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Secondary Dryland Forest	9,878	19,513	19,513	19,513	19,513
Primary Mangrove Forest	248	248	248	248	248
Secondary Mangrove Forest	1,233	1,233	1,233	1,233	1,233
Settlement	711	711	711	711	711
Estate crop	5,554	5,554	5,554	5,554	5,554
Dryland Agriculture	1,641	1,641	1,641	1,641	1,641
Mixed Dryland Agriculture	5,558	5,558	5,558	5,520	5,520
Rice Field	277	277	277	277	277
Embankment	806	806	806	806	806
Vacant land	154	154	154	191	191
Palasa Subdistrict	91,695	91,695	91,695	91,695	91,695
Water body	107	107	107	107	107
Shrub	8,556	8,556	8,556	8,556	8,556
Primary Dryland Forest	45,937	25,840	25,840	25,840	25,840
Secondary Dryland Forest	33,281	53,378	53,378	53,378	53,378
Secondary Mangrove Forest	43	43	43	43	43
Settlement	340	340	340	340	340
Estate crop	463	463	463	463	463
Dryland Agriculture	471	471	471	471	471
Mixed Dryland Agriculture	2,112	2,112	2,112	2,112	2,112
Rice Field	190	190	190	190	190
Vacant land	195	195	195	195	195
Parigi Subdistrict	9,913	9,913	9,913	9,913	9,913
Water body	42	42	42	42	42
Shrub	260	260	260	260	260
Primary Dryland Forest	183	183	65	42	42
Secondary Dryland Forest	12	12	130	154	154
Settlement	224	224	224	224	224
Dryland Agriculture	4,844	4,844	4,844	4,844	4,866
Mixed Dryland Agriculture	1,795	1,795	1,795	1,795	1,795
Rice Field	2,552	2,552	2,552	2,552	2,530
Parigi Barat Subdistrict	10,907	10,907	10,907	10,907	10,907
Primary Dryland Forest	9,495	9,495	8,139	7,669	7,669
Secondary Dryland Forest	128	128	1,484	1,954	1,954
Dryland Agriculture	356	356	356	356	356
Mixed Dryland Agriculture	880	880	880	880	880

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Rice Field	48	48	48	48	48
Parigi Selatan Subdistrict	25,402	25,402	25,402	25,402	25,402
Shrub	2,215	2,215	2,215	2,215	2,215
Primary Dryland Forest	15,981	15,981	15,867	15,867	15,867
Secondary Dryland Forest	592	592	706	706	706
Settlement	59	59	59	59	59
Dryland Agriculture	1,228	1,228	1,228	1,228	1,228
Mixed Dryland Agriculture	1,875	1,875	1,875	1,875	1,875
Rice Field	3,453	3,453	3,453	3,453	3,453
Parigi Tengah Subdistrict	8,305	8,305	8,305	8,305	8,305
Primary Dryland Forest	6,352	6,352	6,352	6,350	6,350
Secondary Dryland Forest	134	134	134	136	136
Settlement	84	84	84	84	84
Dryland Agriculture	1,020	1,020	1,020	1,020	1,020
Mixed Dryland Agriculture	715	715	715	715	715
Parigi Utara Subdistrict	6,053	6,053	6,053	6,053	6,053
Shrub	19	19	19	19	19
Primary Dryland Forest	3,498	3,272	3,272	3,272	2,659
Secondary Dryland Forest	93	319	319	319	933
Settlement	60	60	60	60	60
Dryland Agriculture	1,996	1,996	1,996	1,996	1,996
Mixed Dryland Agriculture	387	387	387	387	387
Sausu Subdistrict	21,588	21,588	21,588	21,588	21,588
Water body	178	178	178	178	178
Shrub	2,138	2,138	2,138	2,138	2,179
Primary Dryland Forest	157	157	157	157	157
Secondary Dryland Forest	15,003	15,003	15,003	15,003	14,962
Primary Mangrove Forest	207	207	109	109	109
Secondary Mangrove Forest	186	186	284	284	284
Settlement	0	0	0	0	0
Dryland Agriculture	128	128	128	128	128
Mixed Dryland Agriculture	2,055	2,055	2,055	2,055	2,055
Rice Field	516	516	516	516	516
Embankment	797	797	797	797	797
Transmigration	223	223	223	223	223
Siniu Subdistrict	6,634	6,634	6,634	6,634	6,634
Primary Dryland Forest	4,306	4,251	4,251	4,251	4,251

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Secondary Dryland Forest	181	237	237	237	237
Settlement	107	107	107	107	107
Dryland Agriculture	72	72	72	72	72
Mixed Dryland Agriculture	1,967	1,967	1,967	1,967	1,967
Taopa Subdistrict	38,674	38,674	38,674	38,674	38,674
Water body	218	218	218	218	218
Shrub	745	745	745	745	745
Primary Dryland Forest	21,199	18,356	18,356	15,835	15,835
Secondary Dryland Forest	4,409	7,253	7,253	9,773	9,773
Primary Mangrove Forest	1,175	1,175	1,175	1,175	1,175
Secondary Mangrove Forest	342	342	342	342	342
Settlement	86	86	86	86	86
Estate Crop	3,101	3,101	3,101	3,101	3,101
Dryland Agriculture	4,766	4,766	4,766	4,766	4,766
Mixed Dryland Agriculture	1,116	1,116	1,116	1,116	1,116
Rice Field	492	492	492	492	492
Embankment	444	444	444	444	444
Vacant land	175	175	175	175	175
Transmigration	405	405	405	405	405
Tinombo Subdistrict	55,285	55,285	55,285	55,285	55,285
Water body	118	118	118	118	118
Shrub	1,123	1,123	1,404	1,404	1,404
Primary Dryland Forest	30,802	30,462	26,968	26,915	26,915
Secondary Dryland Forest	11,805	11,568	14,781	14,781	14,781
Primary Mangrove Forest	16	16	16	16	16
Secondary Mangrove Forest	57	57	57	57	57
Settlement	630	630	630	630	630
Dryland Agriculture	1,465	1,465	1,465	1,465	1,465
Mixed Dryland Agriculture	8,647	9,225	9,296	9,296	9,296
Rice Field	543	543	472	472	472
Vacant land	78	78	78	131	131
Tinombo Selatan Subdistrict	36,866	36,866	36,866	36,866	36,866
Water body	134	134	134	134	134
Shrub	314	314	314	314	314
Primary Dryland Forest	18,715	18,715	18,635	18,635	18,635
Secondary Dryland Forest	12,282	12,282	12,362	12,362	12,362

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Primary Mangrove Forest	189	189	189	189	189
Secondary Mangrove Forest	321	321	321	321	321
Settlement	71	71	71	71	71
Dryland Agriculture	2,815	2,815	2,815	2,815	2,815
Mixed Dryland Agriculture	334	334	334	334	334
Rice Field	1,536	1,536	1,536	1,536	1,536
Embankment	155	155	155	155	155
Tomini Subdistrict	28,777	28,777	28,777	28,777	28,777
Shrub	711	711	711	711	711
Primary Dryland Forest	16,385	15,803	13,624	13,624	13,624
Secondary Dryland Forest	5,737	6,318	8,498	8,498	8,498
Secondary Mangrove Forest	18	18	18	18	18
Settlement	162	162	162	162	162
Estate Crop	1,154	1,154	1,154	1,154	1,154
Dryland Agriculture	349	349	349	349	349
Mixed Dryland Agriculture	3,974	3,974	3,974	3,974	3,974
Rice Field	288	288	288	288	288
Toribulu Subdistrict	20,020	20,020	20,020	20,020	20,020
Water body	39	39	39	39	39
Primary Dryland Forest	8,924	8,924	8,924	8,924	8,924
Secondary Dryland Forest	4,429	4,429	4,429	4,429	4,429
Primary Mangrove Forest	34	34	34	34	34
Secondary Mangrove Forest	227	227	227	227	227
Settlement	199	199	199	199	199
Dryland Agriculture	677	677	677	677	677
Mixed Dryland Agriculture	4,709	4,709	4,709	4,709	4,709
Rice Field	708	708	708	708	708
Embankment	75	75	75	75	75
Torue Subdistrict	22,165	22,165	22,165	22,165	22,165
Shrub	204	204	204	204	204
Primary Dryland Forest	16,254	16,254	16,254	16,254	16,254
Secondary Dryland Forest	79	79	79	79	79
Settlement	109	109	109	109	109
Dryland Agriculture	617	617	617	617	617
Mixed Dryland Agriculture	2,938	2,938	2,938	2,938	2,938
Rice Field	1,963	1,963	1,963	1,963	1,963

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
District Poso	665,203	665,203	665,203	665,203	665,203
Lage Subdistrict	27,082	27,082	27,082	27,082	27,082
Water body	190	190	190	190	190
Shrub	0	2,241	2,869	2,869	1,789
Primary Dryland Forest	8,360	8,360	8,360	8,360	8,360
Secondary Dryland Forest	11,657	8,788	8,788	8,788	8,585
Settlement	61	61	61	61	61
Estate Crop	38	38	38	38	38
Dryland Agriculture	3,628	3,628	3,628	3,628	4,912
Mixed Dryland Agriculture	2,920	3,548	2,920	2,920	2,920
Rice Field	186	186	186	186	186
Vacant land	43	43	43	43	43
Lore Barat Subdistrict	30,887	30,887	30,887	30,887	30,887
Water body	196	196	196	196	196
Shrub	688	688	688	688	688
Primary Dryland Forest	26,055	26,043	26,043	26,043	26,043
Secondary Dryland Forest	2,188	2,200	2,188	2,188	2,188
Dryland Agriculture	970	970	970	970	970
Mixed Dryland Agriculture	495	495	495	495	495
Rice Field	293	293	293	293	293
Vacant land	1	1	12	12	12
Lore Peore Subdistrict	38,771	38,771	38,771	38,771	38,771
Shrub	58	58	58	58	58
Primary Dryland Forest	25,613	25,613	25,613	25,613	25,613
Secondary Dryland Forest	5	5	5	5	5
Settlement	21	21	21	21	21
Dryland Agriculture	5,659	5,659	5,659	5,659	5,659
Mixed Dryland Agriculture	409	409	409	409	409
Rice Field	17	17	17	17	17
Vacant land	6,990	6,990	6,990	6,990	6,990
Lore Selatan Subdistrict	60,703	60,703	60,703	60,703	60,703
Water body	171	171	171	171	171
Shrub	3,457	3,617	3,617	3,617	3,617
Primary Dryland Forest	46,849	46,849	46,849	46,849	46,849
Secondary Dryland Forest	7,898	7,738	7,738	7,738	7,738
Dryland Agriculture	254	254	254	254	254

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Mixed Dryland Agriculture	3	3	3	3	3
Rice Field	812	812	812	812	812
Vacant land	1,260	1,260	1,260	1,260	1,260
Lore Tengah Subdistrict	64,542	64,542	64,542	64,542	64,542
Shrub	267	267	267	267	267
Primary Dryland Forest	49,432	49,432	49,432	49,432	49,432
Secondary Dryland Forest	3,000	3,000	3,000	3,000	3,000
Mining	3,672	3,672	3,672	3,672	3,672
Dryland Agriculture	2,243	2,243	2,243	2,243	2,243
Mixed Dryland Agriculture	1,377	1,377	1,377	1,377	1,377
Rice Field	1,134	1,134	1,134	1,134	1,134
Vacant land	3,417	3,417	3,417	3,417	3,417
Lore Timur Subdistrict	14,080	14,080	14,080	14,080	14,080
Water body	28	28	28	28	28
Primary Dryland Forest	4,666	4,666	4,666	4,666	4,666
Dryland Agriculture	6,323	6,323	6,323	6,323	6,323
Mixed Dryland Agriculture	733	733	733	733	733
Rice Field	656	656	656	656	656
Dryland Agriculture	1,674	1,674	1,674	1,674	1,674
Lore Utara Subdistrict	55,603	55,603	55,603	55,603	55,603
Shrub	470	470	470	470	470
Primary Dryland Forest	44,928	43,918	43,918	43,918	43,918
Secondary Dryland Forest	3,111	4,121	4,121	4,121	4,121
Dryland Agriculture	4,603	4,603	4,603	4,603	4,603
Mixed Dryland Agriculture	2,153	2,153	2,153	2,153	2,153
Rice Field	338	338	338	338	338
Pamona Barat Subdistrict	24,502	24,502	24,502	24,502	24,502
Water body	305	305	305	305	305
Primary Dryland Forest	16,452	16,452	12,626	12,626	12,626
Secondary Dryland Forest	621	621	4,447	4,447	4,447
Settlement	135	135	135	135	135
Dryland Agriculture	644	644	644	644	644
Mixed Dryland Agriculture	4,953	4,953	4,953	4,953	4,953
Rice Field	1,124	1,124	1,124	1,124	1,124
Vacant land	269	269	269	269	269
Pamona Selatan Subdistrict	40,648	40,648	40,648	40,648	40,648

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Water body	241	241	241	241	241
Shrub	137	137	137	137	137
Primary Dryland Forest	6,905	6,905	3,061	3,061	3,061
Secondary Dryland Forest	21,494	21,494	25,337	24,116	24,116
Settlement	64	64	64	64	64
Dryland Agriculture	11,138	11,138	11,138	11,138	11,138
Mixed Dryland Agriculture	670	670	670	1,891	1,891
Pamona Tenggara Subdistrict	13,733	13,733	13,733	13,733	13,733
Water body	132	132	132	132	132
Shrub	390	390	390	390	390
Primary Dryland Forest	397	397	38	38	38
Secondary Dryland Forest	6,835	6,835	7,194	7,194	7,194
Dryland Agriculture	5,965	5,965	5,965	5,965	5,965
Mixed Dryland Agriculture	1	1	1	1	1
Rice Field	11	11	11	11	11
Pamona Timur Subdistrict	47,441	47,441	47,441	47,441	47,441
Water body	15	15	15	15	15
Shrub	2,121	2,254	2,650	2,650	2,650
Primary Dryland Forest	10,309	10,309	10,309	10,294	10,294
Secondary Dryland Forest	24,766	24,612	24,081	24,096	24,096
Settlement	418	418	418	418	418
Dryland Agriculture	2,840	2,840	2,840	2,840	2,840
Mixed Dryland Agriculture	2,719	2,719	2,807	2,807	2,807
Rice Field	692	692	692	692	692
Vacant land	3,561	3,581	3,629	3,629	3,629
Pamona Utara Subdistrict	99,955	99,955	99,955	99,955	99,955
Water body	290	290	290	290	290
Shrub	1,458	3,575	4,174	4,174	4,174
Primary Dryland Forest	39,893	39,893	39,828	39,828	39,796
Secondary Dryland Forest	40,321	38,162	37,628	37,628	36,216
Settlement	993	993	993	993	993
Dryland Agriculture	8,831	8,831	8,831	8,831	9,915
Mixed Dryland Agriculture	4,479	4,513	4,513	4,513	4,873
Rice Field	303	303	303	303	303
Vacant land	2,916	2,924	2,924	2,924	2,924
Transmigration	471	471	471	471	471

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Poso Kota Subdistrict	5,093	5,093	5,093	5,093	5,093
Water body	27	27	27	27	27
Shrub	0	30	30	30	30
Primary Dryland Forest	0	0	0	0	0
Secondary Dryland Forest	759	729	729	729	729
Settlement	332	332	332	332	332
Dryland Agriculture	2,255	2,255	2,255	2,255	2,255
Mixed Dryland Agriculture	1,719	1,719	1,719	1,719	1,719
Poso Kota Selatan Subdistrict	4,807	4,807	4,807	4,807	4,807
Water body	43	43	43	43	43
Shrub	75	708	708	708	708
Primary Dryland Forest	224	224	224	224	224
Secondary Dryland Forest	1,625	992	992	992	992
Settlement	80	80	80	80	80
Estate Crop	182	182	182	182	182
Dryland Agriculture	213	213	213	213	213
Mixed Dryland Agriculture	2,366	2,366	2,366	2,366	2,366
Poso Kota Utara Subdistrict	4,150	4,150	4,150	4,150	4,150
Water body	23	23	23	23	23
Shrub	289	1,221	1,221	1,221	1,221
Primary Dryland Forest	22	22	22	22	22
Secondary Dryland Forest	1,125	194	194	194	194
Secondary Mangrove Forest	533	533	533	533	533
Settlement	209	209	209	209	209
Estate Crop	525	525	525	525	525
Dryland Agriculture	297	297	297	297	297
Mixed Dryland Agriculture	1,125	1,125	1,125	1,125	1,125
Poso Pesisir Subdistrict	38,177	38,177	38,177	38,177	38,177
Water body	34	34	34	34	34
Shrub	3,228	3,228	4,201	4,201	4,312
Primary Dryland Forest	24,353	24,353	24,242	24,242	24,023
Secondary Dryland Forest	2,227	2,227	1,365	1,365	1,474
Secondary Mangrove Forest	260	260	260	260	260
Settlement	41	41	41	41	41
Estate Crop	153	153	153	153	153
Dryland Agriculture	4,868	4,868	4,868	4,868	4,868

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Mixed Dryland Agriculture	2,388	2,388	2,388	2,388	2,388
Rice Field	507	507	507	507	507
Vacant land	117	117	117	117	117
Poso Pesisir Selatan Subdistrict	41,592	41,592	41,592	41,592	41,592
Water body	79	79	79	79	79
Shrub	847	1,480	1,534	1,534	1,534
Primary Dryland Forest	28,704	28,704	28,570	28,570	28,570
Secondary Dryland Forest	3,562	2,851	722	722	664
Settlement	36	36	36	36	36
Estate Crop	1,175	1,175	1,175	1,175	1,175
Dryland Agriculture	2,067	2,067	4,276	4,276	4,276
Mixed Dryland Agriculture	2,153	2,232	2,232	2,232	2,290
Rice Field	219	219	219	219	219
Vacant land	2,637	2,637	2,637	2,637	2,637
Transmigration	113	113	113	113	113
Poso Pesisir Utara Subdistrict	53,437	53,437	53,437	53,437	53,437
Water body	256	256	256	256	256
Shrub	1,386	1,386	3,028	3,028	3,877
Primary Dryland Forest	21,990	17,720	16,668	16,668	16,078
Secondary Dryland Forest	24,224	28,494	28,814	27,763	26,087
Primary Mangrove Forest	226	226	0	0	0
Secondary Mangrove Forest	201	201	426	426	426
Dryland Agriculture	2,564	2,564	2,564	2,564	2,564
Mixed Dryland Agriculture	2,095	2,095	1,186	2,237	3,606
Rice Field	210	210	210	210	210
Embankment	285	285	285	285	285
Vacant land	0	0	0	0	48
District Sigi	491,944	491,944	491,944	491,944	491,944
Dolo Barat Subdistrict	11,591	11,591	11,591	11,591	11,591
Water body	153	153	153	153	153
Shrub	710	710	710	710	710
Primary Dryland Forest	3,583	3,583	3,583	3,583	3,583
Secondary Dryland Forest	415	415	415	415	415
Settlement	23	23	23	23	23
Dryland Agriculture	4,490	4,490	4,490	4,490	4,490
Mixed Dryland Agriculture	1,041	1,041	1,041	1,041	1,041

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Rice Field	1,176	1,176	1,176	1,176	1,176
Dolo Selatan Subdistrict	19,949	19,949	19,949	19,949	19,949
Water body	60	60	60	60	60
Shrub	2,197	2,197	2,197	2,197	2,197
Primary Dryland Forest	13,732	13,732	13,732	13,371	13,371
Secondary Dryland Forest	674	674	674	1,035	1,035
Dryland Agriculture	918	918	918	918	918
Mixed Dryland Agriculture	2,067	2,067	2,067	2,067	2,067
Rice Field	300	300	300	300	300
Gumbasa Subdistrict	8,385	8,385	8,385	8,385	8,385
Water body	21	21	21	21	21
Shrub	898	898	898	898	898
Primary Dryland Forest	6,668	6,668	6,668	6,586	6,586
Secondary Dryland Forest	0	0	0	82	82
Dryland Agriculture	265	265	265	265	265
Mixed Dryland Agriculture	534	534	534	534	534
Kinovaro Subdistrict	23,662	23,662	23,662	23,662	23,662
Water body	49	49	49	49	49
Shrub	5,919	6,353	7,380	7,672	7,672
Primary Dryland Forest	6,641	6,239	6,239	6,239	6,239
Secondary Dryland Forest	10,433	10,400	9,373	9,081	9,081
Dryland Agriculture	89	89	89	89	89
Mixed Dryland Agriculture	376	376	376	376	376
Rice Field	156	156	156	156	156
Kulawi Subdistrict	113,889	113,889	113,889	113,889	113,889
Water body	222	222	222	222	222
Shrub	7,901	7,986	10,553	10,550	10,880
Primary Dryland Forest	89,132	88,659	88,042	85,446	85,427
Secondary Dryland Forest	8,111	8,434	6,549	9,071	8,761
Dryland Agriculture	3,906	3,906	3,906	3,983	3,983
Mixed Dryland Agriculture	3,885	3,885	3,885	3,885	3,885
Rice Field	731	731	731	731	731
Vacant land	0	66	0	0	0
Kulawi Selatan Subdistrict	41,811	41,811	41,811	41,811	41,811
Water body	72	72	72	72	72
Shrub	696	696	696	696	976

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Primary Dryland Forest	36,433	35,696	35,335	35,696	35,696
Secondary Dryland Forest	1,106	1,843	2,196	1,835	1,556
Settlement	24	24	24	24	24
Dryland Agriculture	3	3	3	3	3
Mixed Dryland Agriculture	2,723	2,723	2,723	2,723	2,723
Rice Field	666	666	666	666	666
Vacant land	89	89	96	96	96
Lindu Subdistrict	32,149	32,149	32,149	32,149	32,149
Water body	3,477	3,477	3,477	3,477	3,477
Shrub	640	640	640	640	640
Primary Dryland Forest	21,391	21,391	21,391	21,391	21,391
Secondary Dryland Forest	3,313	3,313	3,313	3,313	3,313
Dryland Agriculture	1,498	1,498	1,498	1,498	1,498
Mixed Dryland Agriculture	982	982	982	982	982
Rice Field	848	848	848	848	848
Marawola Subdistrict	17,562	17,562	17,562	17,562	17,562
Water body	218	218	218	218	218
Shrub	924	924	924	924	924
Secondary Dryland Forest	1,445	1,445	1,444	1,444	1,444
Settlement	155	155	155	155	155
Dryland Agriculture	4,587	4,587	4,587	4,587	4,587
Mixed Dryland Agriculture	5,275	5,275	5,275	5,275	5,275
Grassland	798	798	798	798	798
Rice Field	4,081	4,081	4,081	4,081	4,081
Vacant land	78	78	78	78	78
Marawola Barat Subdistrict	15,824	15,824	15,824	15,824	15,824
Shrub	552	1,311	1,805	1,805	1,805
Primary Dryland Forest	6,196	6,196	5,412	5,412	5,412
Secondary Dryland Forest	9,076	8,317	8,607	8,607	8,607
Nakilalaki Subdistrict	23,166	23,166	23,166	23,166	23,166
Shrub	180	180	180	180	180
Primary Dryland Forest	16,499	14,989	14,989	14,989	14,989
Secondary Dryland Forest	1,991	3,502	3,502	3,502	3,502
Settlement	131	131	131	131	131
Dryland Agriculture	355	355	355	355	355
Mixed Dryland Agriculture	2,702	2,702	2,702	2,702	2,702

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Rice Field	1,308	1,308	1,308	1,308	1,308
Palolo Subdistrict	16,393	16,393	16,393	16,393	16,393
Water body	0	0	0	0	0
Shrub	783	783	783	783	783
Primary Dryland Forest	9,583	9,583	9,583	9,583	9,583
Secondary Dryland Forest	446	446	446	446	446
Settlement	50	50	50	50	50
Mixed Dryland Agriculture	3,610	3,610	3,610	3,610	3,610
Rice Field	1,921	1,921	1,921	1,921	1,921
Pipikoro Subdistrict	102,089	102,089	102,089	102,089	102,089
Water body	300	300	300	300	300
Shrub	8,078	8,078	8,322	8,322	8,751
Primary Dryland Forest	74,068	72,397	72,220	72,397	72,397
Secondary Dryland Forest	11,682	13,352	13,285	13,108	12,679
Settlement	19	19	19	19	19
Dryland Agriculture	2,205	2,205	2,205	2,205	2,205
Mixed Dryland Agriculture	4,525	4,525	4,525	4,525	4,525
Rice Field	1,214	1,214	1,214	1,214	1,214
Sigi Biromaru Subdistrict	54,018	54,018	54,018	54,018	54,018
Water body	22	22	22	22	22
Shrub	503	503	1,221	1,221	1,256
Primary Dryland Forest	37,483	37,389	30,105	30,105	30,080
Secondary Dryland Forest	4,509	4,603	11,169	11,169	11,070
Settlement	263	263	263	263	263
Dryland Agriculture	1,842	1,842	1,842	1,842	1,842
Mixed Dryland Agriculture	5,026	5,026	5,026	5,026	5,051
Grassland	1,560	1,560	1,560	1,560	1,560
Rice Field	2,810	2,810	2,810	2,810	2,810
Vacant land	0	0	0	0	64
Tanambulava Subdistrict	11,455	11,455	11,455	11,455	11,455
Water body	8	8	8	8	8
Shrub	1,376	1,376	1,376	1,376	1,376
Primary Dryland Forest	6,087	6,087	6,087	6,087	6,087
Secondary Dryland Forest	103	103	103	103	103
Settlement	0	0	0	0	0
Dryland Agriculture	885	885	885	885	885

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Mixed Dryland Agriculture	1,454	1,454	1,454	1,454	1,454
Grassland	308	308	308	308	308
Rice Field	1,234	1,234	1,234	1,234	1,234
District Tojo Una-Una	490,321	490,321	490,321	490,321	490,321
Ampana Kota Subdistrict	27,606	27,606	27,606	27,606	27,606
Shrub	440	440	4,166	4,166	4,190
Primary Dryland Forest	5,180	1,873	0	0	0
Secondary Dryland Forest	9,553	12,845	10,992	10,971	10,931
Settlement	157	157	157	157	157
Estate Crop	1,194	1,194	1,194	1,194	1,194
Dryland Agriculture	7,512	7,526	7,526	7,526	7,543
Mixed Dryland Agriculture	3,523	3,523	3,523	3,544	3,544
Rice Field	48	48	48	48	48
Ampana Tete	81,602	81,602	81,602	81,602	81,602
Water body	211	211	211	211	211
Shrub	4,015	4,725	4,728	4,728	4,763
Primary Dryland Forest	56,011	1,868	601	601	0
Secondary Dryland Forest	9,228	62,304	63,567	63,567	63,801
Secondary MangroveForest	28	28	28	28	28
Setllement	416	416	416	416	416
Dryland Agriculture	7,344	7,703	7,703	7,703	7,779
Mixed Dryland Agriculture	4,281	4,281	4,281	4,281	4,538
Vacant land	67	67	67	67	67
Togian Subdistrict	18,836	18,836	18,836	18,836	18,836
Shrub	1,283	1,283	1,283	1,283	1,283
Primary Dryland Forest	9,722	9,722	9,722	9,722	9,546
Secondary Dryland Forest	180	180	180	180	180
Secondary MangroveForest	2,821	2,821	2,821	2,821	2,821
Setllement	11	11	11	11	11
Dryland Agriculture	890	890	890	890	890
Mixed Dryland Agriculture	3,929	3,929	3,929	3,929	4,105
Tojo Subdistrict	104,059	104,059	104,059	104,059	104,059
Water body	320	320	320	320	320
Shrub	899	899	8,753	8,945	8,945
Primary Dryland Forest	76,104	75,237	70,556	70,397	70,397
Secondary Dryland Forest	13,195	14,062	10,472	10,094	9,429

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Primary Mangrove Forest	5	5	5	5	5
Secondary Mangrove Forest	32	32	32	32	32
Settlement	1,243	1,243	1,243	1,243	1,243
Estate crop	698	698	698	698	698
Dryland Agriculture	6,004	6,004	6,421	6,421	6,421
Mixed Dryland Agriculture	4,510	4,510	4,510	4,854	5,520
Rice Field	361	361	361	361	361
Vacant land	689	689	689	689	689
Tojo Barat Subdistrict	59,791	59,791	59,791	59,791	59,791
Shrub	63	238	1,546	1,546	1,546
Primary Dryland Forest	2,269	2,269	2,269	2,269	2,269
Secondary Dryland Forest	45,659	45,485	43,858	43,858	43,858
Primary Mangrove Forest	91	91	0	0	0
Secondary Mangrove Forest	6	6	97	97	97
Settlement	64	64	64	64	64
Dryland Agriculture	10,379	10,379	10,698	10,698	10,698
Mixed Dryland Agriculture	1,040	1,040	1,040	1,040	1,040
Rice Field	217	217	217	217	217
Ulubongka Subdistrict	149,467	149,467	149,467	149,467	149,467
Water body	1,392	1,392	1,392	1,392	1,392
Shrub	7,897	10,341	16,278	16,388	16,388
Primary Dryland Forest	62,322	43,021	41,071	41,071	41,071
Secondary Dryland Forest	44,943	61,750	56,003	54,764	53,687
Settlement	284	284	284	284	284
Dryland Agriculture	23,845	23,895	23,895	24,348	25,334
Mixed Dryland Agriculture	6,564	6,564	8,324	9,000	9,092
Rice Field	6	6	6	6	6
Vacant land	2,214	2,214	2,214	2,214	2,214
Unauna Subdistrict	33,259	33,259	33,259	33,259	33,259
Water body	31	31	31	31	31
Shrub	1,578	1,578	4,961	4,961	4,961
Primary Dryland Forest	817	817	817	817	817
Secondary Dryland Forest	26,190	26,190	22,806	22,806	22,719
Primary Mangrove Forest	1,059	1,059	1,059	1,059	1,059
Secondary Mangrove Forest	1,058	1,058	1,058	1,058	1,058
Settlement	154	154	154	154	154

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Dryland Agriculture	1,362	1,362	1,362	1,362	1,362
Mixed Dryland Agriculture	554	554	554	554	642
Vacant land	456	456	456	456	456
Walea Besar Subdistrict	4	4	4	4	4
Secondary Mangrove Forest	4	4	4	4	4
Walea Kepulauan Subdistrict	15,698	15,698	15,698	15,698	15,698
Shrub	1,548	1,548	1,548	1,548	1,548
Primary Dryland Forest	59	59	59	59	59
Secondary Dryland Forest	11,426	11,426	11,426	11,426	11,359
Secondary Mangrove Forest	1,521	1,521	1,521	1,521	1,521
Dryland Agriculture	426	426	426	426	478
Mixed Dryland Agriculture	718	718	718	718	732
District Toli-Toli	351,429	351,429	351,429	351,429	351,429
Baolan Subdistrict	53,726	53,726	53,726	53,726	53,726
Water body	30	30	30	30	30
Shrub	1,597	1,760	3,806	3,806	3,806
Primary Dryland Forest	27,528	27,528	22,786	22,786	22,220
Secondary Dryland Forest	17,927	17,251	19,947	19,947	20,492
Primary Mangrove Forest	103	103	103	103	103
Secondary Mangrove Forest	5	5	5	5	5
Settlement	792	792	792	792	792
Estate crop	1,342	1,342	1,342	1,342	1,342
Dryland Agriculture	1,359	1,359	1,359	1,359	1,380
Mixed Dryland Agriculture	560	1,073	1,073	1,073	1,073
Rice field	1,673	1,673	1,673	1,673	1,673
Embankment	810	810	810	810	810
Basidondo Subdistrict	56,246	56,246	56,246	56,246	56,246
Water body	236	236	236	236	236
Shrub	1,370	2,174	4,186	4,209	4,209
Primary Dryland Forest	26,947	26,947	26,599	25,297	25,297
Secondary Dryland Forest	21,305	17,880	15,847	17,127	17,127
Primary Mangrove Forest	79	79	79	79	79
Settlement	136	136	136	136	136
Estate crop	494	494	494	494	494
Dryland Agriculture	4,591	4,591	4,767	4,767	4,767
Mixed Dryland Agriculture	897	3,517	3,710	3,710	3,710

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Rice field	107	107	107	107	107
Embankment	83	83	83	83	83
Dakopemean Subdistrict	16,926	16,926	16,926	16,926	16,926
Primary Dryland Forest	8,587	8,587	7,931	7,931	7,931
Secondary Dryland Forest	4,875	4,875	4,582	4,582	4,582
Primary Mangrove Forest	65	65	65	65	65
Secondary Mangrove Forest	71	71	71	71	71
Settlement	155	155	155	155	155
Dryland Agriculture	2,236	2,236	2,236	2,236	2,236
Mixed Dryland Agriculture	540	540	1,489	1,489	1,489
Rice Field	397	397	397	397	397
Dampal Selatan Subdistrict	21,474	21,474	21,474	21,474	21,474
Shrub	600	600	600	600	600
Primary Dryland Forest	5,608	5,608	5,608	5,608	5,608
Secondary Dryland Forest	4,862	4,862	4,862	4,862	4,796
Primary Mangrove Forest	36	36	36	36	36
Settlement	328	328	328	328	328
Estate crop	4,165	4,165	4,165	4,165	4,165
Dryland Agriculture	3,498	3,498	3,498	3,498	3,564
Mixed Dryland Agriculture	271	271	271	271	271
Rice field	2,081	2,081	2,081	2,081	2,081
Embankment	26	26	26	26	26
Dampal Utara	18,041	18,041	18,041	18,041	18,041
Water body	27	27	27	27	27
Shrub	1,709	1,709	3,995	3,995	3,995
Secondary Dryland Forest	14,238	14,238	11,952	11,952	11,952
Primary Mangrove Forest	16	16	16	16	16
Settlement	558	558	558	558	558
Estate crop	101	101	101	101	101
Dryland Agriculture	855	855	855	855	855
Mixed Dryland Agriculture	176	176	176	176	176
Swamp	27	27	27	27	27
Rice field	301	301	301	301	301
Embankment	34	34	34	34	34
Dondo Subdistrict	38,298	38,298	38,298	38,298	38,298
Water body	141	141	141	141	141

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Shrub	733	1,328	1,760	1,760	1,760
Primary Dryland Forest	16,110	16,110	16,110	16,110	15,973
Secondary Dryland Forest	12,657	10,037	9,605	9,605	9,725
Primary Mangrove Forest	53	53	53	53	53
Settlement	457	457	457	457	457
Dryland Agriculture	4,786	4,786	4,786	4,786	4,786
Mixed Dryland Agriculture	1,357	3,382	3,382	3,382	3,382
Rice field	1,795	1,795	1,795	1,795	1,795
Embankment	209	209	209	209	209
Vacant land	0	0	0	0	17
Galang Subdistrict	44,173	44,173	44,173	44,173	44,173
Shrub	1,297	1,297	1,297	1,297	1,297
Primary Dryland Forest	29,025	29,025	23,245	23,245	23,245
Secondary Dryland Forest	1	1	5,781	5,781	5,781
Primary Mangrove Forest	83	83	83	83	83
Settlement	535	535	535	535	535
Estate crop	2,397	2,397	2,397	2,397	2,397
Dryland Agriculture	5,603	5,603	5,603	5,603	5,603
Mixed Dryland Agriculture	468	468	468	468	468
Rice field	4,735	4,735	4,735	4,735	4,735
Embankment	29	29	29	29	29
Lampasio Subdistrict	32,227	32,227	32,227	32,227	32,227
Water body	78	78	78	78	78
Shrub	6	64	223	223	210
Primary Dryland Forest	7,627	7,585	7,569	7,569	7,569
Secondary Dryland Forest	12,805	12,789	11,812	11,807	11,807
Secondary Mangrove Forest	58	58	58	58	58
Secondary Swamp Forest	3,822	3,822	3,822	3,822	3,822
Settlement	51	51	51	51	51
Estate crop	224	224	224	224	224
Dryland Agriculture	6,340	6,340	6,641	6,641	6,641
Mixed Dryland Agriculture	247	247	780	786	799
Rice field	866	866	866	866	866
Transmigration	102	102	102	102	102
Ogodeide Subdistrict	30,963	30,963	30,963	30,963	30,963
Water body	355	355	355	355	355

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Shrub	1,537	2,057	3,042	3,042	3,042
Swamp Shrub	207	207	207	207	207
Secondary Dryland Forest	14,605	13,727	12,711	12,679	12,615
Primary Mangrove Forest	819	819	819	819	819
Secondary Mangrove Forest	353	353	353	353	353
Secondary Swamp Forest	1,911	1,911	1,836	1,836	1,836
Settlement	80	80	80	80	80
Estate crop	33	33	33	33	33
Dryland Agriculture	5,998	5,998	5,947	5,979	6,043
Mixed Dryland Agriculture	4,243	4,602	4,602	4,602	4,602
Swamp	0	0	75	75	75
Rice Field	626	626	626	626	626
Embankment	196	196	196	196	196
Vacant land	0	0	82	82	82
Tolitoli Utara Subdistrict	39,355	39,355	39,355	39,355	39,355
Water body	198	198	198	198	198
Shrub	560	560	560	560	560
Primary Dryland Forest	10,825	10,718	10,455	10,455	10,015
Secondary Dryland Forest	15,982	16,089	15,398	15,398	15,838
Primary Mangrove Forest	121	121	121	121	121
Secondary Mangrove Forest	74	74	74	74	74
Settlement	392	392	392	392	392
Estate crop	310	310	310	310	310
Dryland Agriculture	4,286	4,286	4,286	4,286	4,286
Mixed Dryland Agriculture	5,824	5,824	6,777	6,777	6,777
Rice Field	689	689	689	689	689
Embankment	94	94	94	94	94
City of Palu	38,767	38,767	38,767	38,767	38,767
Palu Barat subdistrict	7,310	7,310	7,310	7,310	7,310
Water body	30	30	30	30	30
Shrub	2,236	2,236	2,236	2,409	2,409
Primary Dryland Forest	390	390	390	390	390
Secondary Dryland Forest	2,783	2,783	2,783	2,610	2,610
Settlement	1,149	1,149	1,149	1,149	1,149
Dryland Agriculture	318	318	318	318	318
Rice Field	405	405	405	405	405

Land use/Land Cover	Area (Ha)				
	2000	2003	2006	2009	2011
Palu Selatan Subdistrict	6,733	6,733	6,733	6,733	6,733
Water body	35	35	35	35	35
Airport	106	106	106	106	106
Shrub	34	34	34	34	777
Primary Dryland Forest	2,216	2,135	621	621	621
Secondary Dryland Forest	547	628	2,142	2,142	1,065
Settlement	1,874	1,874	1,874	1,874	1,874
Mining	595	595	595	595	614
Dryland Agriculture	1,236	1,236	1,236	1,236	1,550
Rice Field	91	91	91	91	91
Palu Timur Subdistrict	16,244	16,244	16,244	16,244	16,244
Water body	5	5	5	5	5
Shrub	201	201	333	333	1,200
Primary Dryland Forest	8,099	8,099	4,857	4,857	4,857
Secondary Dryland Forest	1,137	1,137	4,247	4,247	3,327
Settlement	527	527	527	546	546
Mining	5,732	5,732	5,732	5,732	5,732
Dryland Agriculture	122	122	122	122	176
Mixed Dryland Agriculture	392	392	392	373	373
Embankment	28	28	28	28	28
Palu Utara Subdistrict	8,480	8,480	8,480	8,480	8,480
Water body	98	98	98	98	98
Shrub	1,720	1,720	2,071	2,071	2,071
Primary Dryland Forest	669	287	287	287	287
Secondary Dryland Forest	1,090	1,472	1,121	1,121	1,121
Settlement	296	296	296	296	296
Mining	701	701	701	701	701
Dryland Agriculture	3,680	3,680	3,680	3,680	3,680
Mixed Dryland Agriculture	224	224	224	224	224
Vacant land	1	1	1	1	1
No Data	36,753	36,753	36,753	36,753	36,753
Total	6,105,123	6,105,123	6,105,123	6,105,123	6,105,123

Source: Land Use and land Cover Spasial spasial data, Directorate General of Plannology, Ministry of forestry

6.2 Forest Area

a. Forest Function

Central Sulawesi forest areas are divided by function into production forest classified into permanent production forest, limited production forest, and forest conversion; protected forests and conservation forests covering the Natural Park and Reserve Forest area include Lore Lindu National Park. Area of production forests with the largest proportion of 35% of the total forest area, then use the other areas and protected areas with their respective proportion of 32% and 22% as shown in Table 6.1 and Figure 6.1.

Table 6.3 Forest area based on function in the region of Central Sulawesi

No.	Forest Function	Area (Ha)
1	Another area of use	1,944,642
2	Protection Forest	1,339,695
3	Production Forest	465,937
4	Conversion Forest	272,553
5	Limited Production Forest	1,418,043
6	Natural Park and Reserve Forest	397,827
7	Lore Lindu National Park	215,875
8	No data	58,795
Total		6,113,368

Source: Spatial Data of Appointment forests and waters, Director General of Planning Ministry of Forestry

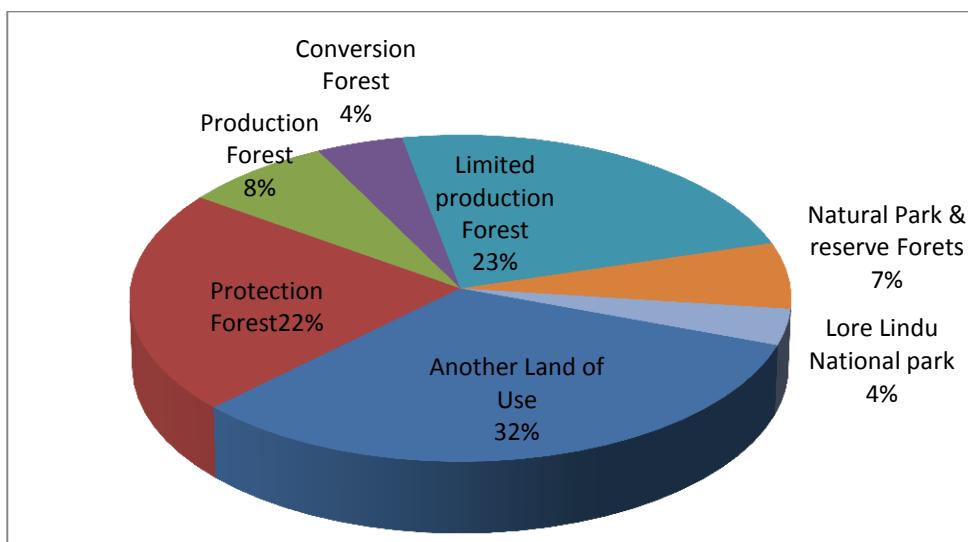


Figure 6.2 Percentage of Forest Function Area in Central Sulawesi

Table 6.4 Forest function area in the Central Sulawesi by District / City and Subdistrict

District/ Subdistrict	Another Land of Use	Area (Ha)							No Data	Total
		Protection Forest	Production Forest	Conversion Forest	Limited Production Forest	Natural Park & Reserve Forest	Ntional Park. Lore Lindu			
Banggai	3,113	705	1,878	8,942	1,348	13,258		95	29,339	
Balantak	133							68	201	
Batui	91			19		12,227			12,337	
Bualemo	13			4,858				13	4,884	
Kintom	5								5	
Lamala				4,055					4,055	
Luwuk					1,233				1,233	
Nuhon	496	163		0	89			13	761	
Pagimana		542			1	1,031			1,574	
Toili	111	0	1,859	7	11				1,989	
Toili Barat	2,263	0	19	4	14				2,300	
Banggai Kepulauan	640	3,054	941	2,018	8,075			40	14,767	
Banggai								2	2	
Banggai Utara								3	3	
Bangkurung		1,434		1,138	2,205				4,777	
Bokan Kepulauan	2	1,172			1,726			25	2,925	
Bulagi	636								636	
Bulagi Utara					2,981			7	2,988	
Labobo		448		880	782				2,110	
Peling Tengah					381				381	
Tinangkung			941						941	
Tinangkung Utara								2	2	
Totikum Selatan	2								2	
Buol	75	976	10,137	2,244				35	13,467	
Bokat		0	0						0	
Bukal			1,731						1,731	
Gadung		0	2,754	0				27	2,782	
Keramat			541						541	
Momunu	24								24	
Paleleh	2		5,111	520				2	5,635	

District/ Subdistrict	Another Land of Use	Area (Ha)							Ntional Park. Lore Lindu	No Data	Total
		Protection Forest	Production Forest	Conversion Forest	Limited Production Forest	Natural Park & Reserve Forest					
Paleleh Barat				1,724						1,724	
Tiloan	49	976							5	1,030	
Donggala	1,549	5,773	2,059	5,495	4,024				1,159	20,060	
Balaseang	46	2,350		2,255	2,773				330	7,755	
Banawa Selatan	683	0			0					683	
. Banawa Tengah		0								0	
Dampelas Sojol		2,174			1,141				674	3,988	
Labuan	545				0					545	
Pinembani	1									1	
Rio Pakava	0		2,059	3,240	0					5,299	
Sidue	0				48				51	99	
Sidue Tobata	157	0		0	1					158	
Sidue Tombusabora	1	0			0					1	
Sirenja	23	734		0	59				105	921	
Sojol	1	487			2					489	
Tana Tovea	94	28			0					122	
Morowali	30,881	7,459	24,161	17,943	22,944	4,529			831	108,749	
Bahodopi	0	2,642		4,129	0					6,771	
Bumi Raya	1									1	
Bungku Barat	2,729			7,553	2,737					13,019	
Bungku Selatan	39	2,464			381					2,884	
Bungku Tengah	4,037			1,638						5,675	
Bungku Utara	3,023	0			0	120			656	3,800	
Lembo	992	0	5,198		11,751					17,941	
Mamo Salato	6,097	2,266	0	4,624	1,064					14,051	
Menui Kepulauan	15								15	31	
Mori Atas	18		7,577			4,408				12,004	
Petasia	4,475	87	11,386		601				160	16,709	
Soyo Jaya	9,451				6,410					15,860	
Wita Ponda	3									3	

District/ Subdistrict	Another Land of Use	Area (Ha)							Ntional Park. Lore Lindu	No Data	Total
		Protection Forest	Production Forest	Conversion Forest	Limited Production Forest	Natural Park & Reserve Forest					
Parigi Moutong	1,270	0	5,112	351	16,349				323	23,406	
Ampibabo			1,000	351						1,351	
Balinggi	2			0						2	
Bolano Lambunu	130							122	252		
Kasimbar	40				0					40	
Moutong	45	0			5,443			186	5,674		
Palasa	383				0					383	
Parigi	1				0					1	
Sausu	4			1						5	
Taopa	2	0			0					2	
Tinombo	12		4,112		5,042			16	9,182		
Tinombo Selatan	81				5,864					5,945	
Tomini	568									568	
Poso	5,793	92	2,190	5,558	114			118	13,865		
Lage	1									1	
Lore Barat	450	91								541	
Lore Selatan	31	1		5,556						5,589	
Lore Tengah	4,850									4,850	
Lore Timur	19							19	37		
Pamona Barat	6									6	
Pamona Selatan	3									3	
Pamona Tenggara	8	0								8	
Pamona Timur	417							15	432		
Pamona Utara			0							0	
Poso Kota	6							6	11		
Poso Pesisir								14	14		
Poso Pesisir Selatan			1,703		0					1,703	
Poso Pesisir Utara	3		487	1	114			64	669		
Sigi	10,121	398	635	4,071	33	2				15,261	

District/ Subdistrict	Another Land of Use	Area (Ha)							No Data	Total
		Protection Forest	Production Forest	Conversion Forest	Limited Production Forest	Natural Park & Reserve Forest	Ntional Park. Lore Lindu			
Dolo Barat	2									2
Dolo Selatan	9									9
Kinovaro	1									1
. Kulawi	2,716	0	635	0	0					3,350
Kulawi Selatan	0	4								4
Lindu	14						2			16
Marawola	100									100
Nakilalaki	512									512
Pipikoro	6,768	394		4,071	33					11,267
Tojo Una- Una	5,835	15,955	28,279	4,617	1,315	28	64	56,093		
Ampana Kota			4,687							4,687
Ampana Tete	2,184		1,913		2					4,099
Togian		545	716	1,585						2,846
Tojo	19	5,787	8,081					17		13,903
Ulubongka	3,632	0	9,566	1,661	1,120	28		16		16,025
Unauna	0	6,459	2,781	1,370				31		10,641
Walea Besar		963	120							1,083
Walea Kepulauan		2,200	416		193					2,809
Toli-Toli	230	3,761	0	1,106	5	0	207	5,310		
Baolan		185								185
Basidondo	0	3,016	0			0				3,016
Dakopemean	0									0
Dampal Utara	21	321						25		367
Dondo	33				5			24		62
Lampasio	0									0
Ogodeide	4	239		1,106				9		1,359
Tolitoli Utara	172							149		321
No Data	1,885,135	1,301,522	390,544	220,207	1,363,835	380,010	215,875	55,923	5,813,051	
Total	1,944,642	1,339,695	465,937	272,553	1,418,043	397,827	215,875	58,795	6,113,368	

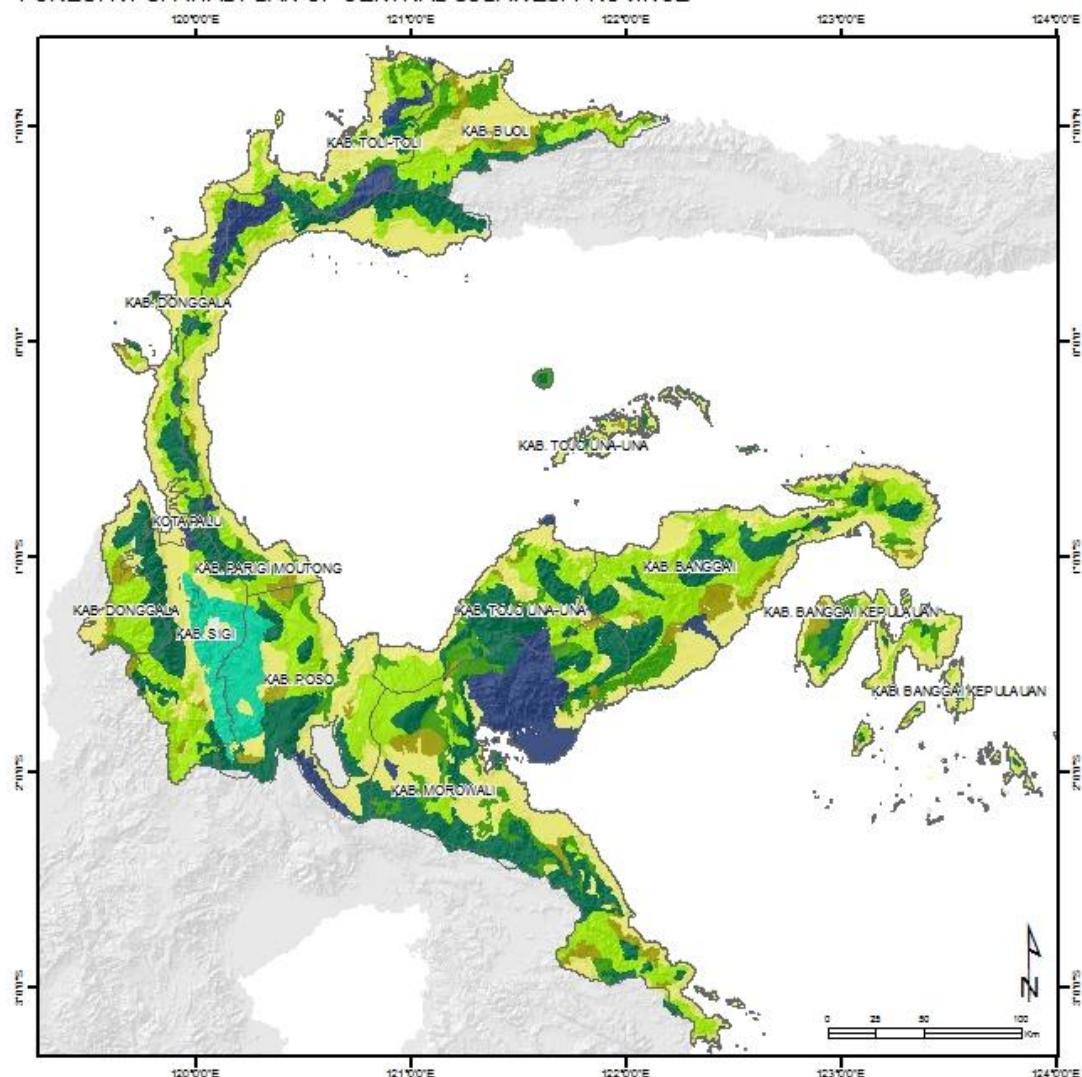
Source: Spatial Data of Appointment forests and waters, Director General of Planning Ministry of Forestry

Approximately 7,231,890 ha of the total forest area managed by the company's production forest management license holder (Forest Concession) as shown in table 6

Table 6.5 Extensive logging in the province of Central Sulwesi by District/ City

District/Forest Concession	Area (Ha)
District Banggai	
PT. Palopo Timber Company	535,500
PT.Bina Balantak Raya	857,430
PT.Dahatama Adi Karya	904,680
District Donggala	
PT.Satya Sena Indratama	203,460
PT.Sulwood Eksport Development	824,700
District Morowali	
PT.Balantak Rimba Rejeki	109,500
PT.Bina Balantak Raya	571,620
PT.Wahana Sari Sakti	1,500,000
Distict Sigi	
PT.Satria Yuda Wanabakti	1,725,000
Total	7,231,890

FORESTRY SPATIAL PLAN OF CENTRAL SULAWESI PROVINCE



Forestry spatial plan

- Other function area
- Protection Forest
- Production Forest
- Convertable Production Forest
- Limited Production Forest
- Nature Reserve
- National Park

UN-REDD
PROGRAMME

Sumber data:
Ditjen Planologi, Kementerian Kehutanan

Figure 6.3 Map of Forestry Spatial Plan of Central Sulawesi

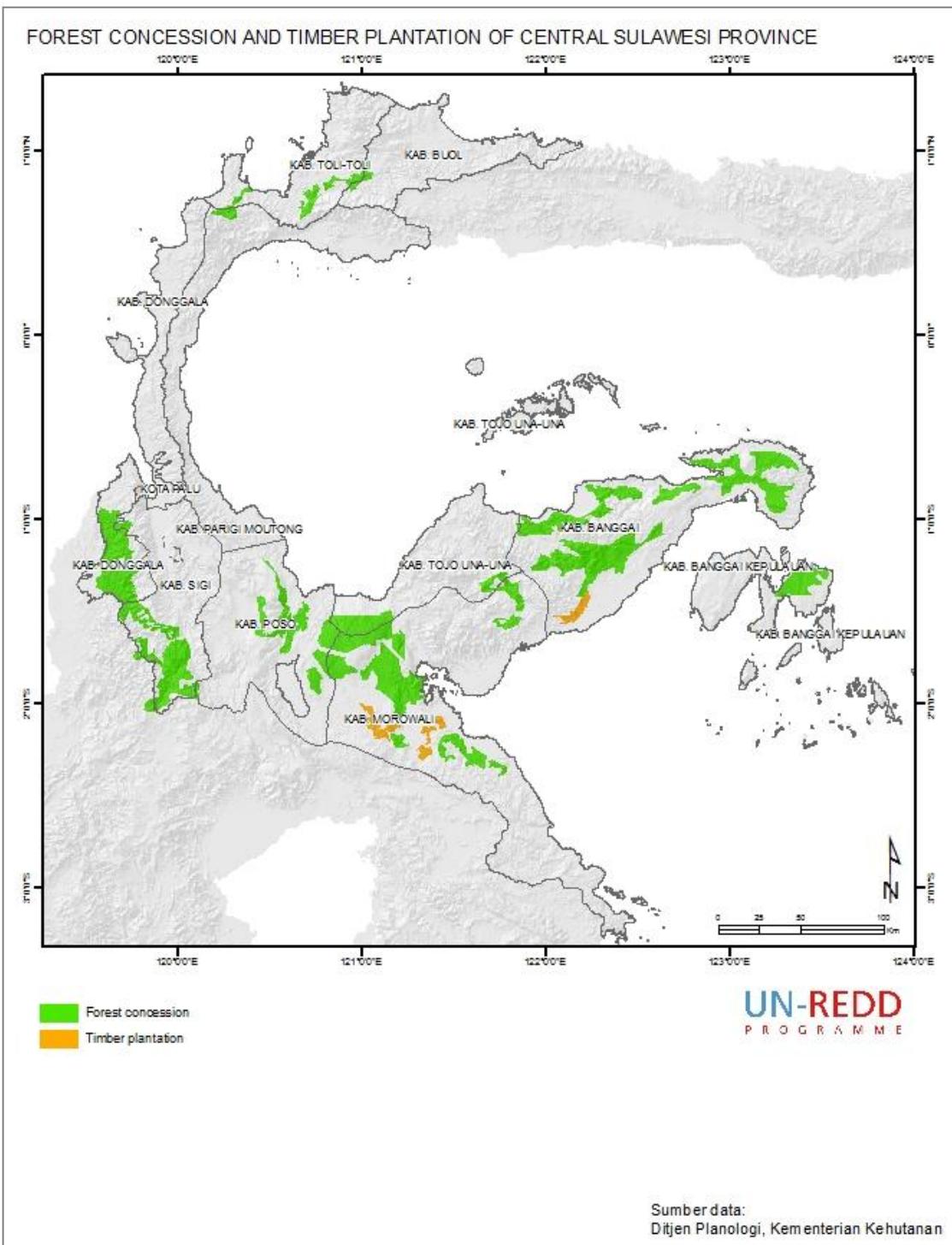


Figure 6.4 Map of Forest Concession and Timber Plantation in Central Sulawesi

b. Critical Land

Table 6.6 Critical Land Area by Forest Function

Criticality Status	Forest Function (Ha)							Total (Ha)
	Another land use	Protected Forest	Production Forest	Conversion Forest	Limited Production Forest	Natural Park & Reserve Forest	Protection Area	
Sight critical	342,545	68,052	46,994	34,383	121,211	26,332	70,326	709,843
Critical	15,920	50,509	9,943	14,782	69,616	37,192	66,844	264,805
Potentialy critical	1,030,834	1,124,165	260,718	160,737	1,034,764	448,695	40,279	4,100,193
Very Critical	13	4,510	674	1,488	7,957	5,117	4,380	24,139
Total (Ha)	1,389,312	1,247,236	318,329	211,391	1,233,548	517,336	181,828	5,098,980

Source: Land use and Land cover Spasial Data, DG of Planologi of Forestry Ministry

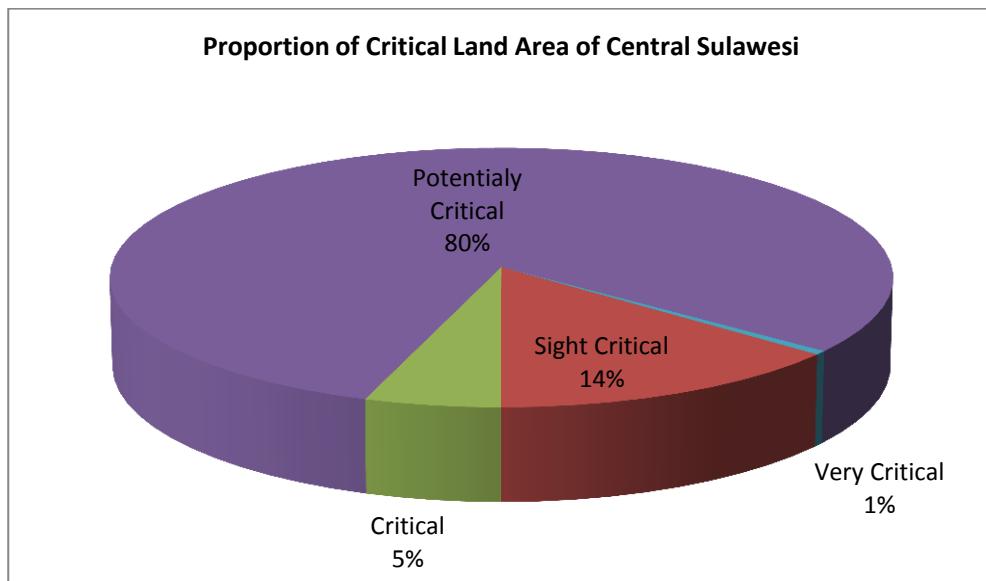


Figure 6.5 Percentage of Critical Land Area of Central Sulawesi

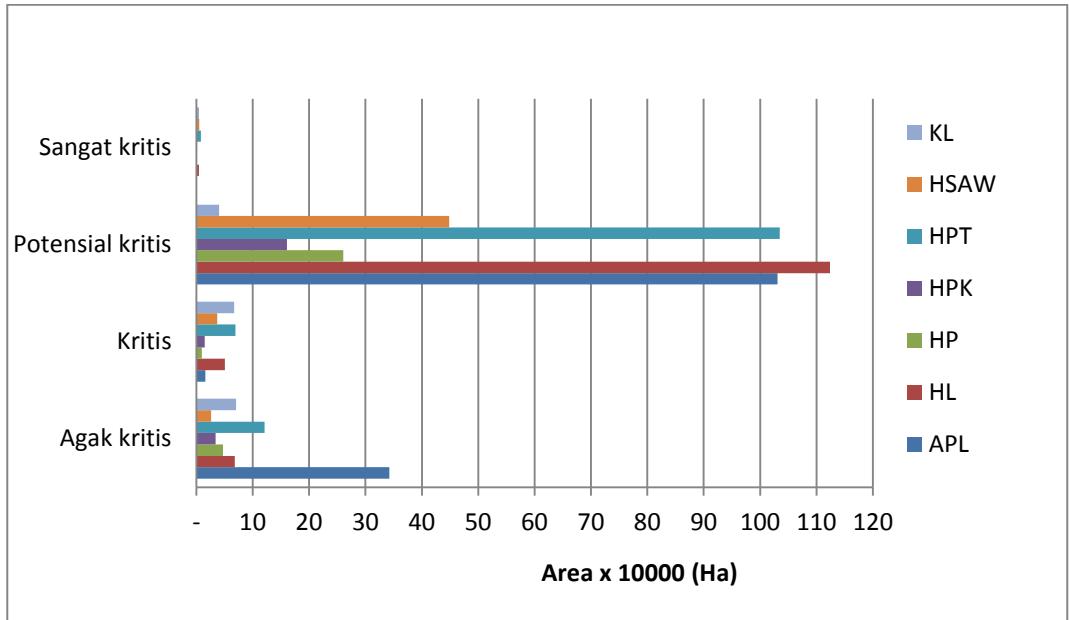


Figure 6.6 Chart of Critical Land Area based on Forest Function

Table 6.7 Critical Land Area based on Forest Function by District/City and Subdistrict

Critical Land	Area (ha)					Total
	Sight Critical	Critical	Potentially Critical	Very Critical		
District Banggai	100,402	22,977	604,068	4,413	731,860	
Balantak Subdistrict	18,966	3,122	13,918	42	36,048	
Another land of use	6,926	179	11,043	0	18,148	
Protection Forest	2,697	2,008	-	-	4,704	
Production Forest	31	-	1,657	-	1,688	
Conversion Forest	7	-	0	-	7	
Limited Production Forest	8,657	230	1,218	-	10,104	
Protection Area	648	706	-	42	1,396	
Batui Subdistrict	6,968	-	61,118	-	68,085	
Another land of use	3,319	-	15,107	-	18,426	
Protection Forest	-	-	10,442	-	10,442	
Conversion Forest	3,131	-	24,955	-	28,086	
Limited Production Forest	506	-	10,163	-	10,669	
Natural Park & Reserve Forest	12	-	138	-	150	
Protection Area	-	-	313	-	313	
Bualemo Subdistrict	17,999	3,367	55,450	698	77,514	

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Another land of use	6,860	216	23,127	-	30,203
Protection Forest	153	1,319	6,652	313	8,437
Production Forest	488	-	7,419	-	7,908
Conversion Forest	1,936	206	2,535	2	4,679
Limited Production Forest	8,175	1,494	14,283	383	24,335
Natural Park & Reserve Forest	386	1	1,121	-	1,508
Protection Area	-	131	313	-	443
Bunta	9,929	5,558	154,382	417	170,285
Another land of use	4,344	327	27,355	-	32,027
Protection Forest	156	755	40,471	33	41,415
Limited Production Forest	5,291	2,768	83,689	384	92,131
Protection Area	138	1,708	2,867	-	4,713
Kintom	2,948	452	30,432	-	33,832
Another land of use	2,037	6	4,883	-	6,925
Protection Forest	-	-	4,734	-	4,734
Conversion Forest	748	408	4,825	-	5,981
Limited Production Forest	163	10	15,986	-	16,159
Protection Area	-	29	5	-	34
Lamala	11,823	2,635	38,925	-	53,382
Another land of use	4,322	-	18,029	-	22,351
Protection Forest	714	2,483	6,191	-	9,388
Production Forest	862		6,475	-	7,337
Conversion Forest	2,196	11	1,839	-	4,046
Limited Production Forest	3,728	4	6,238	-	9,971
Protection Area	-	136	152	-	289
Luwuk	8,411	862	31,368	163	40,803
Another land of use	4,689	16	14,940	-	19,645
Protection Forest	1,119	473	7,785	33	9,410
Production Forest	722	64	1,825	-	2,611
Conversion Forest	782	-	1,698	-	2,480
Limited Production Forest	1,008	280	2,741	33	4,063
Natural Park & Reserve Forest	92	-	854	-	945
Protection Area	-	29	1,524	96	1,649
Pagimana	14,647	4,156	51,852	118	70,772
Another land of use	10,899	320	9,077	-	20,296

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Protection Forest	52	394	24,030	-	24,476
Production Forest	222	5	1,731	-	1,957
Conversion Forest	331	4	45	-	380
Limited Production Forest	2,991	1,868	16,200	39	21,097
Natural Park & Reserve Forest	153	639	125	23	940
Protection Area	-	926	645	55	1,625
Toili	8,713	2,826	166,624	2,975	181,138
Another land of use	3,354	1,104	29,718	-	34,176
Protection Forest	439	74	33,210	501	34,224
Production Forest	2,959	159	22,216	-	25,333
Conversion Forest	178	157	11,081	141	11,557
Limited Production Forest	789	1,210	63,441	2,333	67,774
Natural Park & Reserve Forest	995	-	6,205	-	7,200
Protection Area	-	122	753	-	875
District Banggai Kepulauan	88,976	3,511	110,357	887	203,731
Banggai Subdistrict	4,667	232	11,255		16,154
Another land of use	2,852	-	9,800	-	12,653
Protection Forest	1,166	232	675	-	2,073
Limited Production Forest	649	-	780	-	1,429
Protection Area	-	-	-	-	-
Buko	9,901	1,761	10,638	270	22,570
Another land of use	6,435	-	4,949	-	11,384
Protection Forest	548	0	-	-	548
Production Forest	1,133	43	3,815	-	4,991
Conversion Forest	1,517	1,620	1,768	-	4,905
Limited Production Forest	94	98	-	-	192
Protection Area	173	-	106	270	550
Bulagi	45,652	892	32,947	97	79,587
Another land of use	10,223	-	16,944	-	27,167
Protection Forest	17,757	699	272	-	18,729
Production Forest	2,780	-	8,013	-	10,792
Conversion Forest	2,385	35	1,047	-	3,467
Limited Production Forest	12,507	158	6,448	-	19,113
Protection Area	-	-	222	97	319
Labobobangkurung	6,293	545	11,568	22	18,429

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Another land of use	4,294	59	5,869	-	10,223
Protection Forest	359	134	1,781	-	2,274
Conversion Forest	38	130	1,641	-	1,809
Limited Production Forest	1,137	222	2,010	-	3,369
Protection Area	465	-	267	22	754
Liang	13,565	-	8,916	475	22,956
Another land of use	6,273	-	8,436	-	14,709
Protection Forest	673	-	128	-	802
Limited Production Forest	6,037	-	352	-	6,388
Protection Area	582	-	0	475	1,057
Tinangkung	6,590	79	24,129	23	30,821
Another land of use	4,054	-	16,628	-	20,682
Protection Forest	433	-	1,046	-	1,478
Production Forest	371	-	2,171	-	2,542
Limited Production Forest	1,481	79	4,218	-	5,777
Protection Area	252	-	66	23	341
Totikum	2,307	2	10,904	-	13,214
Another land of use	1,288	-	10,444	-	11,732
Production Forest	185	-	199	-	384
Limited Production Forest	833	2	208	-	1,044
Protection Area	-	-	53	-	53
District Buol	28,344	6,667	311,782	3	346,796
Biau Sub district	6,987	734	32,009	2	39,732
Another land of use	4,179	-	8,449	-	12,628
Production Forest	268	0	10,646	-	10,914
Conversion Forest	1,170	89	4,985	-	6,243
Limited Production Forest	118	-	7,052	-	7,170
Natural Park & Reserve Forest	-	-	825	-	825
Protection Area	1,252	646	53	2	1,952
Bokat	2,391	6	11,567	-	13,964
Another land of use	2,391	-	7,445	-	9,836
Protection Forest	-	-	840	-	840
Conversion Forest	-	-	1,178	-	1,178
Limited Production Forest	-	-	1,883	-	1,883
Protection Area	-	6	221	-	227

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Bukal	2,104	166	42,746	-	45,016
Another land of use	1,581	-	15,578	-	17,159
Protection Forest	-	-	14,382	-	14,382
Production Forest	3	-	777	-	780
Conversion Forest	456	126	7,560	-	8,142
Limited Production Forest	-	-	4,330	-	4,330
Protection Area	63	40	119	-	223
Bunobogu	1,190	124	23,494	-	24,808
Another land of use	1,010	-	4,473	-	5,483
Protection Forest	-	-	7,090	-	7,090
Production Forest	179	29	2,499	-	2,707
Conversion Forest	0	-	3,480	-	3,480
Limited Production Forest	-	-	4,771	-	4,771
Protection Area	-	95	1,181	-	1,276
Gadung	754	489	16,989	-	18,232
Another land of use	705	-	3,546	-	4,252
Protection Forest	-	-	2,729	-	2,729
Production Forest	48	-	1,163	-	1,211
Limited Production Forest	0	-	9,196	-	9,197
Protection Area	-	489	355	-	845
Lipunoto	1,153	-	8,151	-	9,304
Another land of use	1,052	-	3,664	-	4,716
Production Forest	101	-	4,487	-	4,587
Momunu	2,713	101	31,237	-	34,051
Another land of use	1,368	-	19,949	-	21,316
Production Forest	707	1	9,921	-	10,629
Conversion Forest	351	-	1,252	-	1,602
Limited Production Forest	-	-	82	-	82
Protection Area	288	100	33	-	422
Paleleh	7,460	4,680	28,647	1	40,789
Another land of use	5,710	-	4,277	-	9,987
Protection Forest	-	-	1,120	-	1,120
Production Forest	926	156	3,896	-	4,978
Conversion Forest	657	721	2,023	-	3,400
Limited Production Forest	111	172	16,569	-	16,852

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Protection Area	56	3,632	762	1	4,452
Tiloan	3,592	366	116,941	-	120,899
Another land of use	2,094	-	21,392	-	23,486
Protection Forest	117	-	18,359	-	18,477
Production Forest	-	-	9,440	-	9,440
Conversion Forest	-	-	4,881	-	4,881
Limited Production Forest	1	-	47,863	-	47,864
Natural Park & Reserve Forest	-	-	4,116	-	4,116
Protection Area	1,380	366	10,889	-	12,635
District Donggala	62,265	25,590	345,998	105	433,959
Balaesang Subdistrict	11,234	1,148	27,146	-	39,528
Another land of use	6,379	0	12,107	-	18,487
Protection Forest	915	326	5,680	-	6,921
Conversion Forest	1,189	8	791	-	1,988
Limited Production Forest	1,518	473	8,564	-	10,555
Protection Area	1,233	342	3	-	1,578
Banawa	7,601	4,510	3,623	75	15,810
Another land of use	5,047	1,723	2,361	-	9,130
Protection Forest	2,459	1,512	1,247	16	5,234
Protection Area	96	1,276	15	59	1,446
Banawa Selatan	9,071	1,090	18,704	-	28,865
Another land of use	3,739	674	7,505	-	11,917
Protection Forest	5,129	93	10,867	-	16,089
Limited Production Forest	7	-	327	-	334
Protection Area	196	323	6	-	525
Damsol	5,323	540	41,263	0	47,126
Another land of use	3,261	13	18,835	0	22,110
Protection Forest	1,055	61	2,134	-	3,250
Production Forest	182	-	4,918	-	5,100
Limited Production Forest	782	457	15,282	-	16,521
Natural Park & Reserve Forest	-	-	93	-	93
Protection Area	42	9	-	-	52
Labuan	817	403	11,752	-	12,972
Another land of use	16	-	3,195	-	3,211
Protection Forest	-	-	5,359	-	5,359

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Limited Production Forest	800	403	3,198	-	4,402
Pinembani	573	12,019	26,196	-	38,788
Another land of use	7	-	-	-	7
Protection Forest	10	1,513	5,032	-	6,556
Conversion Forest	100	3,642	8,333	-	12,075
Limited Production Forest	26	2,491	12,519	-	15,037
Protection Area	430	4,373	312	-	5,114
Rio Pakava	2,544	354	78,678	-	81,576
Another land of use	1,363	-	12,829	-	14,192
Protection Forest	-	2	10,832	-	10,835
Production Forest	19	-	6,379	-	6,397
Conversion Forest	560	128	5,089	-	5,777
Limited Production Forest	554	141	43,549	-	44,244
Protection Area	48	83	-	-	131
Sindue	9,575	1,387	43,294	-	54,256
Another land of use	6,403	0	10,814	-	17,217
Protection Forest	154	37	20,781	-	20,972
Conversion Forest	241	4	788	-	1,033
Limited Production Forest	2,777	1,276	10,911	-	14,964
Protection Area	-	70	-	-	70
Sirenda	3,242	900	15,391	-	19,533
Another land of use	1,785	31	5,656	-	7,471
Protection Forest	4	12	4,652	-	4,668
Conversion Forest	440	9	662	-	1,111
Limited Production Forest	762	583	4,421	-	5,766
Protection Area	252	265	-	-	517
Sojol	8,458	1,488	58,784	0	68,730
Another land of use	5,188	0	17,451	0	22,638
Protection Forest	-	-	486	-	486
Limited Production Forest	821	794	19,057	-	20,672
Natural Park & Reserve Forest	272	7	21,165	-	21,444
Protection Area	2,177	687	625	-	3,489
Tana Ntovaea	3,828	1,751	21,167	30	26,775
Another land of use	1,490	337	1,648	-	3,476
Protection Forest	17	165	9,235	-	9,417

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Limited Production Forest	2,320	1,249	10,283	28	13,880
Protection Area	1	0	-	2	3
District Morowali	120,370	41,745	808,710	3,612	974,437
Bungku Barat Subdistrict	5,570	70	120,007	-	125,646
Another land of use	2,255	-	42,101	-	44,356
Protection Forest	427	10	58,437	-	58,875
Production Forest	764	-	10,554	-	11,318
Conversion Forest	66	-	6,698	-	6,764
Limited Production Forest	-	-	2,217	-	2,217
Protection Area	2,057	60	-	-	2,117
Bungku Selatan	8,070	339	85,164	3	93,575
Another land of use	2,083		24,496		26,579
Protection Forest	50	1	19,300		19,351
Production Forest			2		2
Conversion Forest	1,109	94	7,243		8,446
Limited Production Forest	1,079	1	33,956		35,035
Protection Area	3,749	242	168	3	4,162
Bungku Tengah	5,356	976	61,785		68,117
Another land of use	3,038		14,975		18,013
Protection Forest	633	189	31,056		31,879
Production Forest	31	5	1,669		1,704
Conversion Forest	240		2,153		2,393
Limited Production Forest			11,916		11,916
Protection Area	1,413	782	17		2,212
Bungku Utara	40,534	23,371	225,415	3,227	292,547
Another land of use	8,126	1,104	16,088		25,318
Protection Forest	3,903	1,012	78,739	419	84,074
Production Forest	5,784	3,512	12,481	30	21,806
Conversion Forest	2,239	141	3,070		5,449
Limited Production Forest	6,627	1,355	18,048	139	26,168
Natural Park & Reserve Forest	13,069	14,658	96,836	2,639	127,203
Protection Area	786	1,589	153		2,528
Lembo	13,955	2,871	91,938	88	108,853
Another land of use	2,475	49	27,644		30,168
Protection Forest	4,559	583	49,580	79	54,801

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Production Forest	2,757	14	10,253	1	13,025
Limited Production Forest	2,002	227	4,461		6,690
Protection Area	2,163	1,998		8	4,169
Menui Kepulauan	788	25	16,573		17,387
Another land of use	165	1	13,400		13,566
Production Forest			2		2
Limited Production Forest	624	11	2,706		3,341
Protection Area		13	465		478
Mori Atas	30,734	9,069	101,524	200	141,527
Another land of use	18,686	655	27,925		47,265
Protection Forest	495	1,136	50,615	191	52,437
Production Forest	4,667	1,342	3,691	0	9,700
Conversion Forest	5,900	4,537	6,039		16,476
Limited Production Forest	635	1,126	12,431	9	14,200
Natural Park & Reserve Forest	238	274	824		1,336
Protection Area	112				112
Petasia	11,973	3,165	58,465	10	73,613
Another land of use	4,444	0	26,996		31,440
Protection Forest	4,061	1,413	21,016	10	26,499
Production Forest	1,285		5,901		7,187
Conversion Forest					-
Limited Production Forest	222	56	4,430		4,708
Natural Park & Reserve Forest					-
Protection Area	1,961	1,696	122		3,779
Soyo Jaya	3,391	1,858	47,839	85	53,172
Another land of use	418		6,262		6,680
Protection Forest	1,165	633	8,258		10,057
Production Forest	561	992	3,924		5,478
Conversion Forest	148	5	207		360
Limited Production Forest	118	27	4,776	2	4,923
Natural Park & Reserve Forest	586	181	24,386	83	25,236
Protection Area	394	20	25		438
Palu City	9,821	6,206	20,724	1,892	38,643
Palu Barat Subdistrict	1,716	2,190	3,263	166	7,335
Another land of use	1,589	492	1,975		4,055

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Protection Forest	128	1,425	1,288	40	2,881
Protection Area		273		126	399
Palu Selatan	1,673	717	3,457	759	6,605
Another land of use	1,189	308	2,806		4,303
Protection Forest		148	639		787
Limited Production Forest		3			3
Natural Park & Reserve Forest	484	215	12	674	1,386
Protection Area		41		85	126
Palu Timur	3,930	3,073	8,284	968	16,254
Another land of use	2,293	1,007	1,839		5,139
Protection Forest		45	4,636		4,681
Limited Production Forest	206	476	1,752	27	2,461
Natural Park & Reserve Forest	1,431	1,537	58	939	3,965
Protection Area		7		2	8
Palu Utara	2,502	227	5,719		8,448
Another land of use	1,885	66	4,678		6,628
Protection Forest			9		9
Limited Production Forest	617	161	1,033		1,811
Parigi Moutong District	70,093	60,134	440,031	897	571,155
Ampibabo Subdistrict	5,633	518	34,839		40,989
Another land of use	4,495		15,996		20,491
Protection Forest			8,702		8,702
Production Forest			681		681
Conversion Forest	522	232	3,851		4,604
Limited Production Forest	14	107	5,610		5,731
Protection Area	601	179			781
Bolano Lambunu	6,965	2,046	63,202	11	72,225
Another land of use	4,213		26,822		31,035
Protection Forest		435	17,193		17,628
Production Forest			113		113
Limited Production Forest	995	183	6,441		7,619
Natural Park & Reserve Forest	134	225	11,855	10	12,224
Protection Area	1,624	1,203	779	1	3,607
Kasimbar	9,718	2,146	21,877		33,741
Another land of use	7,231		11,280		18,510

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Protection Forest			3,434		3,434
Limited Production Forest	235	463	7,163		7,861
Protection Area	2,253	1,683			3,935
Moutong	7,526	2,667	82,815		93,008
Another land of use	5,432		26,628		32,060
Protection Forest	469	2,055	44,171		46,695
Limited Production Forest	1,439	33	12,008		13,480
Protection Area	186	579	8		773
Palasa	8,943	33,108	50,003	193	92,247
Another land of use	4,271		10,505		14,776
Protection Forest	361	3,945	19,888		24,194
Limited Production Forest	2,804	9,288	5,248		17,339
Natural Park & Reserve Forest	1,343	11,048	13,650		26,040
Protection Area	164	8,827	713	193	9,897
Parigi	6,739	2,336	55,225	122	64,422
Another land of use	1,707	43	15,869		17,618
Protection Forest			23,471		23,471
Production Forest	1,692		802		2,494
Limited Production Forest	2,691	1,009	12,860	0	16,560
Natural Park & Reserve Forest	648	493	2,223	102	3,466
Protection Area	2	792		19	813
Sausu	7,516	936	45,148	0	53,600
Another land of use	4,498		21,702	0	26,200
Protection Forest			342		342
Production Forest	2,110	0	5,709		7,818
Conversion Forest	572	17	7,439		8,027
Limited Production Forest	337	901	9,952		11,190
Protection Area		18	4		23
Tinombo	12,080	14,978	41,468	571	69,096
Another land of use	9,282	311	5,965		15,557
Protection Forest	125	1,125	5,378		6,629
Production Forest	1,179	190	3,274		4,643
Limited Production Forest	986	7,156	17,649		25,791
Natural Park & Reserve Forest	143	1,108	8,989		10,240
Protection Area	365	5,087	213	571	6,236

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Tinombo Selatan	3,328	1,312	25,774		30,413
Another land of use	2,106		6,719		8,825
Protection Forest	21	163	7,905		8,089
Production Forest			451		451
Limited Production Forest	1,091	246	10,612		11,948
Protection Area	109	903	87		1,099
Torue	1,646	87	19,681		21,413
Another land of use	28		4,319		4,348
Protection Forest			7,224		7,224
Production Forest	1,617	30	6,287		7,935
Limited Production Forest			1,851		1,851
Protection Area		57			57
District Poso	75,286	16,165	529,939	4,035	625,425
Lage Subdistrict	3,177	251	18,913	1	22,342
Another land of use	987		10,019		11,005
Protection Forest			764		764
Production Forest	48		5,062		5,110
Limited Production Forest			3,068		3,068
Protection Area	2,142	251		1	2,394
Lore Selatan	4,647	1,109	76,112	1,056	82,925
Another land of use	1,155		9,050		10,205
Protection Forest	1,478	366	41,900	1,052	44,796
Conversion Forest	262	176	4,979		5,417
Limited Production Forest			277		277
Natural Park & Reserve Forest	307	353	19,906	0	20,567
Protection Area	1,445	213		4	1,663
Lore Tengah	13,334	2,643	57,068	410	73,455
Another land of use	3,840	71	1,417		5,328
Protection Forest	6,945	1,289	13,969	89	22,292
Conversion Forest	136	337	5,151	313	5,937
Limited Production Forest	807	719	7,083	8	8,618
Natural Park & Reserve Forest	1,603	228	29,448	0	31,278
Protection Area	3				3
Lore Utara	9,995	3,358	91,836	2,180	107,369
Another land of use	5,529		15,846		21,375

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Protection Forest	547	167	14,712		15,426
Conversion Forest	1,430	983	1,459	1,032	4,904
Limited Production Forest	2,150	2,117	14,925	1,148	20,340
Natural Park & Reserve Forest	285	79	44,895		45,259
Protection Area	53	13			66
Pamona Selatan	6,672	1,957	51,543	226	60,398
Another land of use	2,062	9	16,578		18,649
Protection Forest	281	1,152	19,170	4	20,607
Production Forest			706		706
Natural Park & Reserve Forest	9	283	15,046		15,339
Protection Area	4,320	512	43	222	5,097
Pamona Timur	8,882	3,264	42,491	37	54,673
Another land of use	7,739	21	6,457		14,216
Protection Forest	11	194	6,215		6,420
Limited Production Forest	980	2,889	28,752	37	32,659
Natural Park & Reserve Forest	86	148	1,067		1,301
Protection Area	66	11			77
Pamona Utara	10,885	2,682	84,160	70	97,797
Another land of use	6,681	9	15,270		21,959
Protection Forest	325	297	19,297		19,919
Production Forest	1,287	2	8,361		9,650
Conversion Forest	473	764	1,862		3,099
Limited Production Forest	1,019	1,405	39,370	70	41,865
Protection Area	1,100	204			1,304
Poso Kota	1,482	1	5,520		7,002
Another land of use	1,397		5,304		6,701
Protection Forest	85	1	216		301
Poso Pesisir	16,213	900	102,296	54	119,463
Another land of use	10,341		18,412		28,752
Protection Forest	347	26	11,020		11,393
Production Forest	1,132		15,982		17,114
Conversion Forest	49		3,912		3,961
Limited Production Forest	3,104	554	52,967	54	56,679
Protection Area	1,240	321	3		1,565
District Sigi	53,720	48,330	386,519	3,889	492,457

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Dolo	682	204	14,318		15,204
Another land of use	3		6,368		6,371
Protection Forest		0	7,682		7,682
Natural Park & Reserve Forest	161	31	267		459
Protection Area	519	173			692
Dolo Selatan	5,493	1,620	30,070	95	37,278
Another land of use	2,409	146	5,533		8,087
Protection Forest	35	171	24,199		24,406
Protection Area	3,048	1,304	337	95	4,785
Gumbasa	1,804	605	13,896		16,306
Another land of use	998		4,268		5,266
Natural Park & Reserve Forest	260	238	9,629		10,126
Protection Area	546	367			913
Kulawi	13,193	8,133	132,376	177	153,879
Another land of use	4,021		7,134		11,155
Protection Forest	62	2,094	41,598		43,754
Production Forest	40	72	2,077		2,189
Conversion Forest	14		5,111		5,125
Limited Production Forest	1,440	2,857	23,914	12	28,222
Natural Park & Reserve Forest	503	249	51,331	72	52,154
Protection Area	7,113	2,862	1,211	93	11,280
Kulawi Selatan	8,076	3,514	26,209	7	37,807
Another land of use	2,073	2,033			4,106
Protection Forest		0	237		237
Conversion Forest	4	120	1,311		1,435
Limited Production Forest	22	142	6,914		7,079
Natural Park & Reserve Forest	675	11	17,746	7	18,439
Protection Area	5,302	1,208		0	6,511
Marawola	4,363	13,090	15,442	1,466	34,361
Another land of use	2,030	1,365	3,516		6,911
Protection Forest	810	7,287	5,281	1,033	14,411
Conversion Forest	0	1	225		226
Limited Production Forest	608	2,188	6,421		9,216
Protection Area	914	2,250		433	3,597
Palolo	6,852	1,619	56,589	13	65,073

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Another land of use	2,249		10,456		12,705
Protection Forest	117	230	16,995		17,343
Conversion Forest	0		94		94
Limited Production Forest	3,404	796	14,755	12	18,968
Natural Park & Reserve Forest	352	172	14,288		14,813
Protection Area	729	420		1	1,150
Pipikoro	8,312	12,154	74,711	1,251	96,427
Another land of use	1,619	1,031			2,650
Protection Forest	62	2,272	17,237		19,572
Production Forest	400		234		635
Conversion Forest	136	40	2,474		2,650
Limited Production Forest	1,895	4,938	53,524	74	60,432
Natural Park & Reserve Forest	10	10	31		51
Protection Area	4,189	3,863	1,210	1,176	10,439
Sigi Biromaru	4,535	6,967	18,225	879	30,606
Another land of use	2,765	1,690	9,197	13	13,665
Protection Forest	13	829	5,731		6,573
Limited Production Forest	1,286	1,842	2,649	268	6,046
Natural Park & Reserve Forest	470	2,461	647	544	4,122
Protection Area	0	145		55	200
Tanambulava	410	423	4,684		5,517
Another land of use	195		2,726		2,921
Natural Park & Reserve Forest	214	347	1,958		2,520
Protection Area		76			76
District Tojo Una-una	62,010	18,812	307,760	3,951	392,533
Ampana Kota Subdistrict	4,124	610	9,868		14,602
Another land of use	2,292		2,468		4,760
Protection Forest			625		625
Production Forest	1,162		1,055		2,217
Limited Production Forest	625	399	4,515		5,539
Natural Park & Reserve Forest	10	96	1,204		1,309
Protection Area	36	116			152
Ampana Tete	5,870	1,046	45,823		52,739
Another land of use	2,628	8	7,015		9,651
Protection Forest			18,458		18,458

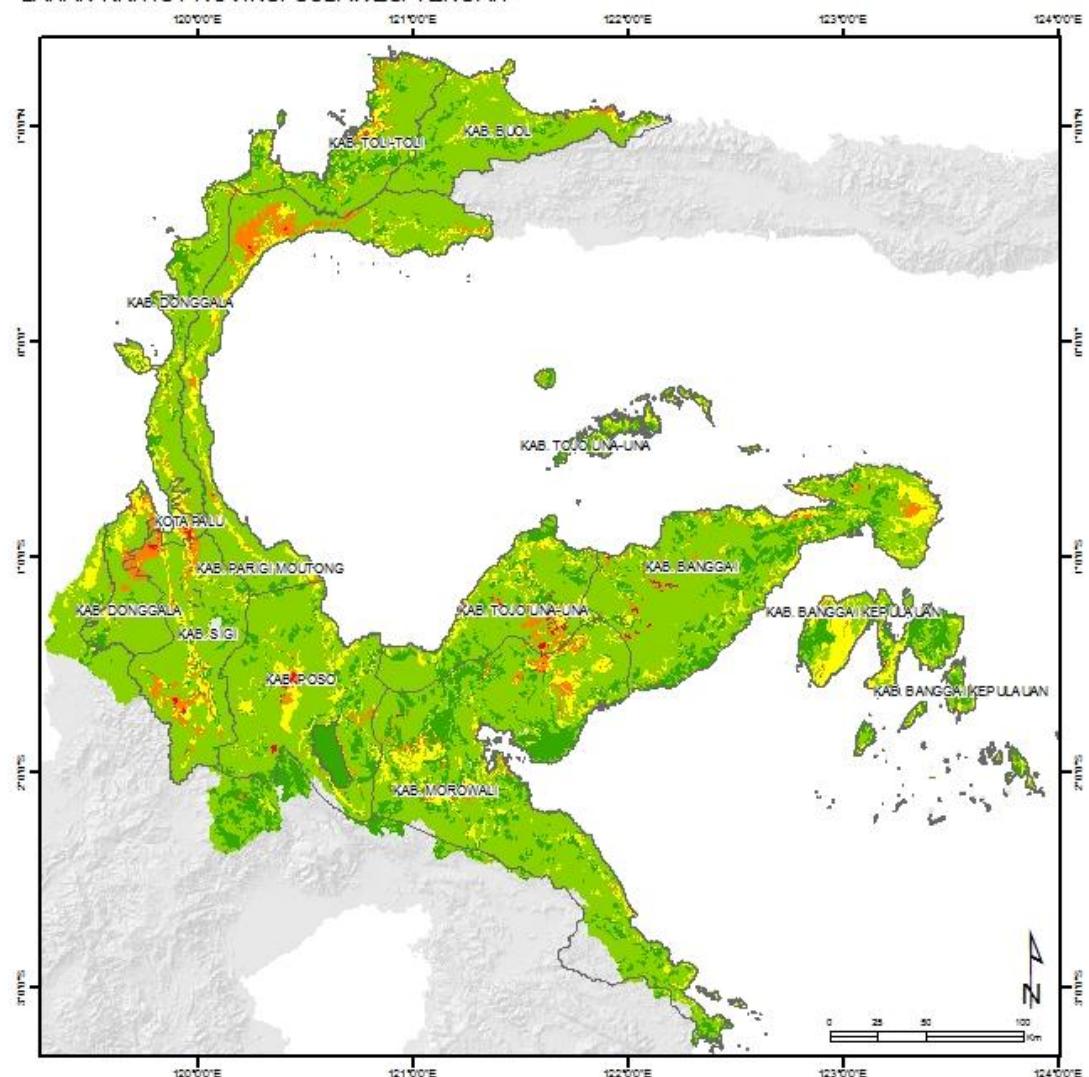
Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Production Forest		1	1,717		1,718
Limited Production Forest	1,648	510	17,072		19,229
Natural Park & Reserve Forest	27	23	1,561		1,611
Protection Area	1,568	503			2,071
Togian	1,893	193	7,112		9,198
Another land of use	866		4,658		5,524
Protection Forest	181		236		417
Production Forest	9		641		649
Conversion Forest	450		690		1,140
Protection Area	387	193	888		1,468
Tojo	12,587	1,458	87,341	598	101,984
Another land of use	5,036	154	5,259		10,449
Protection Forest	64	801	59,424	559	60,848
Production Forest	1,934	83	17,001		19,017
Conversion Forest	554		556		1,110
Limited Production Forest	697	28	3,816	3	4,545
Protection Area	4,303	392	1,285	35	6,015
Tojo Barat	2,070	137	43,355		45,562
Another land of use	795		8,065		8,860
Production Forest			1,674		1,674
Limited Production Forest	1,275	72	33,616		34,964
Protection Area		65			65
Ulubongka	25,539	14,999	88,247	3,325	132,110
Another land of use	6,513	337	18,997		25,847
Protection Forest	876	5,346	39,272	109	45,604
Production Forest	3,105	1,382	5,329	232	10,049
Conversion Forest	1,355	31	2,585		3,971
Limited Production Forest	10,063	6,720	18,216	2,893	37,892
Natural Park & Reserve Forest	552	1,004	2,533	24	4,113
Protection Area	3,075	179	1,314	67	4,635
Una-una	3,127	246	14,696	28	18,097
Another land of use	1,572		6,845		8,418
Protection Forest	797	240	2,734	28	3,799
Production Forest	463	6	4,296		4,765
Conversion Forest	295		446		741

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Protection Area					374
Walea Besar	2,649	122	3,962		6,733
Another land of use	1,881		3,155		5,036
Protection Forest	421		516		937
Production Forest	65		291		356
Protection Area	282	122			405
Walea Kepulauan	4,152		7,356		11,508
Another land of use	2,600		5,736		8,336
Protection Forest	1,412		332		1,744
Production Forest	41		571		612
Limited Production Forest			52		52
Protection Area	99		665		764
District Tolitoli	38,556	14,668	234,304	455	287,983
Baolan Subdistrict	9,064	5,123	37,283	434	51,904
Another land of use	7,732	6	5,019		12,756
Protection Forest	379	425	17,076		17,880
Production Forest	370	906	1,178	411	2,865
Limited Production Forest	349	335	7,749		8,433
Natural Park & Reserve Forest	193	476	4,619		5,288
Protection Area	41	2,976	1,642	23	4,681
Basidondo	2,605	1,164	20,639		24,408
Another land of use	1,921		2,102		4,023
Protection Forest	127	698	2,678		3,503
Production Forest	413	163	6,428		7,004
Limited Production Forest	123	138	628		889
Natural Park & Reserve Forest	21	27	8,791		8,839
Protection Area		139	12		151
Dampal Selatan	2,519	864	28,459		31,841
Another land of use	1,801		8,599		10,400
Limited Production Forest	630	270	14,430		15,330
Natural Park & Reserve Forest	1	1	4,989		4,991
Protection Area	87	593	440		1,120
Dampal Utara	3,854	85	7,869		11,808
Another land of use	2,885		6,481		9,365
Protection Forest			321		321

Critical Land	Area (ha)				
	Sight Critical	Critical	Potentially Critical	Very Critical	Total
Limited Production Forest	969	85	1,068		2,122
Protection Area					-
Dondo	3,238	422	37,650		41,310
Another land of use	2,748		6,445		9,193
Protection Forest	2	13	15,916		15,930
Limited Production Forest	486	343	13,522		14,352
Natural Park & Reserve Forest	2	6	1,736		1,744
Protection Area		61	31		92
Galang	4,436	1,880	29,850	1	36,167
Another land of use	4,141		4,688		8,830
Protection Forest			805		805
Limited Production Forest	204	400	12,595		13,199
Natural Park & Reserve Forest	91	273	11,148		11,512
Protection Area		1,208	614	1	1,823
Lampasio	2,346	314	18,660		21,319
Another land of use	1,960		8,136		10,097
Protection Forest			713		713
Limited Production Forest	13	34	1,529		1,577
Natural Park & Reserve Forest	373	268	8,281		8,922
Protection Area		11			11
Ogodeide	6,430	983	12,166	1	19,579
Another land of use	6,005		10,264		16,269
Protection Forest	151		117		268
Production Forest	217	438	436		1,091
Conversion Forest	14	10	730		754
Limited Production Forest	42	415	45		502
Protection Area		120	574	1	694
Tolitoli Utara	4,064	3,833	41,730	19	49,646
Another land of use	2,231		4,839		7,070
Production Forest	1,675	350	11,436		13,461
Limited Production Forest	8	128	16,337		16,473
Natural Park & Reserve Forest	142	21	4,099		4,262
Protection Area	7	3,335	5,020	19	8,380
Total	709,843	264,805	4,100,193	24,139	5,098,980

Sources: Watershed Management Board of Central Sulawesi

LAHAN KRITIS PROVINSI SULAWESI TENGAH



Critical land

- [Dark Green] Non critical
- [Light Green] Potentially critical
- [Yellow] Slight critical
- [Orange] Critical
- [Red] Very critical

UN-REDD
PROGRAMME

Sumber data:
BPDAS, Provinsi Sulawesi Tengah

Figure 6.6 Map of Critical Land Area of Central Sulawesi

6.3 Agriculture

Table 6.8 Agriculture area by District/City

District/ Subdistrict	Area (Ha)			
	Dryland Agriculture	Mixed Dryland Agriculture	Rice Field	Total
District Banggai	38,461	106,125	11,782	156,368
Balantak	547	12,937		13,484
Batui	4,695	10,782	1,555	17,032
Bualemo	4,959	5,362	895	11,217
Bunta	940	9,147	1,091	11,177
Kintom	2,348	8,637		10,985
Lamala	302	17,445	391	18,137
Luwuk	5,996	10,245		16,241
Luwuk Timur	751	10,653	100	11,504
Masama	792	6,996	2,301	10,089
Nuhon	5,729	3,673	303	9,704
Pagimana	3,539	3,159	204	6,901
Toili	3,645	4,669	3,334	11,648
Toili Barat	4,219	2,421	1,609	8,250
District Banggai Kepulauan	21,454	179,075		200,529
Banggai	63	1,384		1,447
Banggai Selatan		273		273
Banggai Tengah	57	287		343
Banggai Utara	19	1,398		1,417
Bangkurung	895	3,731		4,626
Bokan Kepulauan	1,533	5,597		7,130
Buko	355	13,213		13,568
Buko Selatan	1,147	18,518		19,665
Bulagi	2,184	13,884		16,068
Bulagi Selatan	7,503	11,605		19,109
Bulagi Utara	390	19,468		19,858
Labobo		1,938		1,938
Liang	374	8,587		8,962
Peling Tengah	73	11,338		11,412
Tinangkung	852	16,643		17,495
Tinangkung Selatan	423	14,718		15,141
Tinangkung Utara		15,288		15,288
Totikum	1,387	18,837		20,224

District/ Subdistrict	Area (Ha)			
	Dryland Agriculture	Mixed Dryland Agriculture	Rice Field	Total
Totikum Selatan	4,199	2,367		6,566
District Buol	22,782	20,259	3,131	46,173
Biau	794	2,968	301	4,063
Bokat	111	1,422	974	2,507
Bukal	738	861	48	1,647
Bunobogu	2,950	146	69	3,165
Gadung	5,471			5,471
Keramat	1,807	1,857		3,664
Lipunoto	3,823	796	478	5,098
Momunu	2,165	4,858	619	7,641
Paleleh	1,736	3,687	256	5,679
Paleleh Barat	3,170	1,405	38	4,613
Tiloan	16	2,259	349	2,624
District Donggala	43,322	16,489	8,621	68,432
Balaseang	473	146	801	1,420
Banawa	2,451	738		3,190
Banawa Selatan	92	1,839	741	2,673
Banawa Tengah	1,052	219		1,271
Dampelas Sojol	14,846	2,540	2,617	20,003
Labuan	1,775	1	228	2,003
Pinembani				-
Rio Pakava	9,187	1,270	6	10,463
Sindue	2,031		239	2,270
Sindue Tobata	136	91		227
Sindue Tombusabora	630			630
Sirenja	983	180	1,188	2,351
Sojol	6,273	8,135	2,132	16,540
Sojol Utara	1,973	917	669	3,559
Tana Tovea	1,421	412		1,833
District Morowali	74,959	82,273	12,736	169,968
Bahodopi	1,755	2,935	367	5,058
Bumi Raya	45	4,704	290	5,039
Bungku Barat	920	11,747	631	13,297
Bungku Selatan	909	5,275		6,184
Bungku Tengah	4,134	14,459	1,200	19,793
Bungku Utara	11,615	5,567	297	17,479

District/ Subdistrict	Area (Ha)			
	Dryland Agriculture	Mixed Dryland Agriculture	Rice Field	Total
Lembo	14,592	6,560	1,760	22,912
Mamo Salato	9,451	7,225	479	17,155
Menui Kepulauan		181		181
Mori Atas	20,356	8,809	2,081	31,246
Petasia	5,587	10,564	1,617	17,768
Soyo Jaya	3,179	3,141	4,013	10,333
Wita Ponda	2,416	1,107		3,523
District Parigi Mountong	29,740	60,548	30,199	120,487
Ampibabo		4,372		4,372
Balinggi		6,111	8,419	14,530
Bolano Lambunu	5,489	9,016	8,014	22,519
Kasimbar	1,770	1,362	1,029	4,161
Mepanga	13	17	263	293
Moutong	1,641	5,520	277	7,438
Palasa	471	2,112	190	2,773
Parigi	4,866	1,795	2,530	9,191
Parigi Barat	356	880	48	1,284
Parigi Selatan	1,228	1,875	3,453	6,556
Parigi Tengah	1,020	715		1,734
Parigi Utara	1,996	387		2,383
Sausu	128	2,055	516	2,699
Siniu	72	1,967		2,039
Taopa	4,766	1,116	492	6,374
Tinombo	1,465	9,296	472	11,233
Tinombo Selatan	2,815	334	1,536	4,686
Tomini	349	3,974	288	4,611
Toribulu	677	4,709	708	6,094
Torue	617	2,938	1,963	5,518
District Poso	69,939	36,111	6,503	112,553
Lage	4,912	2,920	186	8,018
Lore Barat	970	495	293	1,759
Lore Peore	5,659	409	17	6,085
Lore Selatan	254	3	812	1,069
Lore Tengah	2,243	1,377	1,134	4,754
Lore Timur	6,323	733	656	7,712
Lore Utara	4,603	2,153	338	7,095

District/ Subdistrict	Area (Ha)			
	Dryland Agriculture	Mixed Dryland Agriculture	Rice Field	Total
Pamona Barat	644	4,953	1,124	6,721
Pamona Selatan	11,138	1,891		13,030
Pamona Tenggara	5,965	1	11	5,978
Pamona Timur	2,840	2,807	692	6,339
Pamona Utara	9,915	4,873	303	15,091
Poso Kota	2,255	1,719		3,974
Poso Kota Selatan	213	2,366		2,579
Poso Kota Utara	297	1,125		1,422
Poso Pesisir	4,868	2,388	507	7,763
Poso Pesisir Selatan	4,276	2,290	219	6,784
Poso Pesisir Utara	2,564	3,606	210	6,381
District Sigi	21,121	34,224	16,445	71,790
Dolo Barat	4,490	1,041	1,176	6,707
Dolo Selatan	918	2,067	300	3,285
Gumbasa	265	534		799
Kinovaro	89	376	156	621
Kulawi	3,983	3,885	731	8,599
Kulawi Selatan	3	2,723	666	3,391
Lindu	1,498	982	848	3,328
Marawola	4,587	5,275	4,081	13,944
Marawola Barat				-
Nakilalaki	355	2,702	1,308	4,365
Palolo		3,610	1,921	5,531
Pipikoro	2,205	4,525	1,214	7,944
Sigi Biromaru	1,842	5,051	2,810	9,702
Tanambulava	885	1,454	1,234	3,573
District Tojo Una-Una	60,505	29,213	632	90,350
Ampana Kota	7,543	3,544	48	11,135
Ampana Tete	7,779	4,538		12,316
Togian	890	4,105		4,995
Tojo	6,421	5,520	361	12,302
Tojo Barat	10,698	1,040	217	11,956
Ulubongka	25,334	9,092	6	34,432
Unauna	1,362	642		2,004
Walea Besar				-
Walea Kepulauan	478	732		1,210

District/ Subdistrict	Area (Ha)			
	Dryland Agriculture	Mixed Dryland Agriculture	Rice Field	Total
District Toli-Toli	40,161	22,746	13,271	76,178
Baolan	1,380	1,073	1,673	4,127
Basidondo	4,767	3,710	107	8,584
Dakopemean	2,236	1,489	397	4,122
Dampal Selatan	3,564	271	2,081	5,915
Dampal Utara	855	176	301	1,332
Dondo	4,786	3,382	1,795	9,963
Galang	5,603	468	4,735	10,806
Lampasio	6,641	799	866	8,306
Ogodeide	6,043	4,602	626	11,270
Tolitoli Utara	4,286	6,777	689	11,753
Kota Palu	5,724	597	495	6,816
Palu Barat	318		405	723
Palu Selatan	1,550	0	91	1,641
Palu Timur	176	373		548
Palu Utara	3,680	224		3,903
No data	238	45	5	288
Total	856,572	1,175,363	207,638	2,239,574

Source: Land use and Land cover Data spasial, DG Planologi of Forestry Ministry

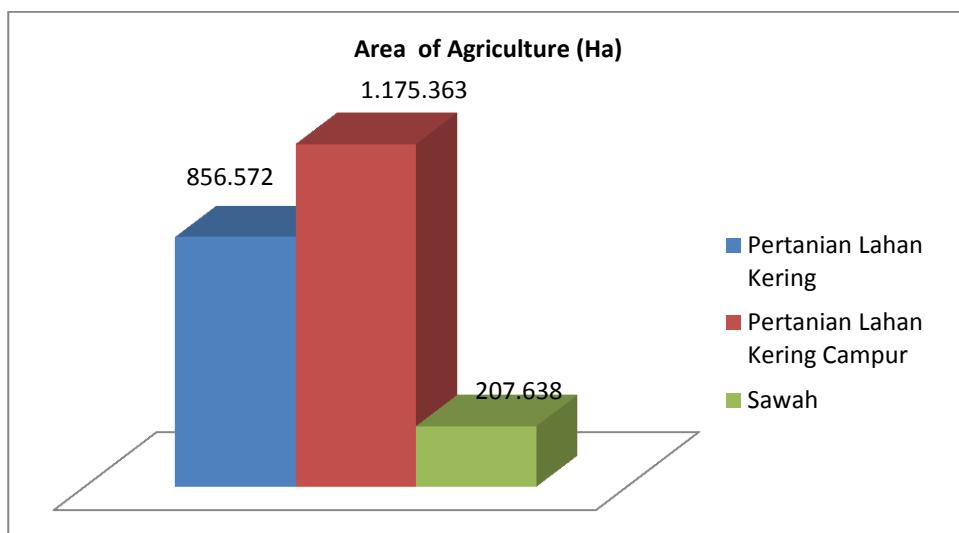


Figure 6.8 Chart of Agriculture Areal of Central Sulawesi

6.4 Estate Crop

Table 6.9 Area of Estate Crop in Central Sulawesi

No	Perkebunan	Luas (Ha)
1	Horticulture	1,063.00
2	Oil Palm Plantation	60,710.87
3	Tea Plantation	7,740.00
4	No data	7,312.10
Total		76,825.97

Source: Plantation Spatial data, Plantation Office of Central Sulawesi Province

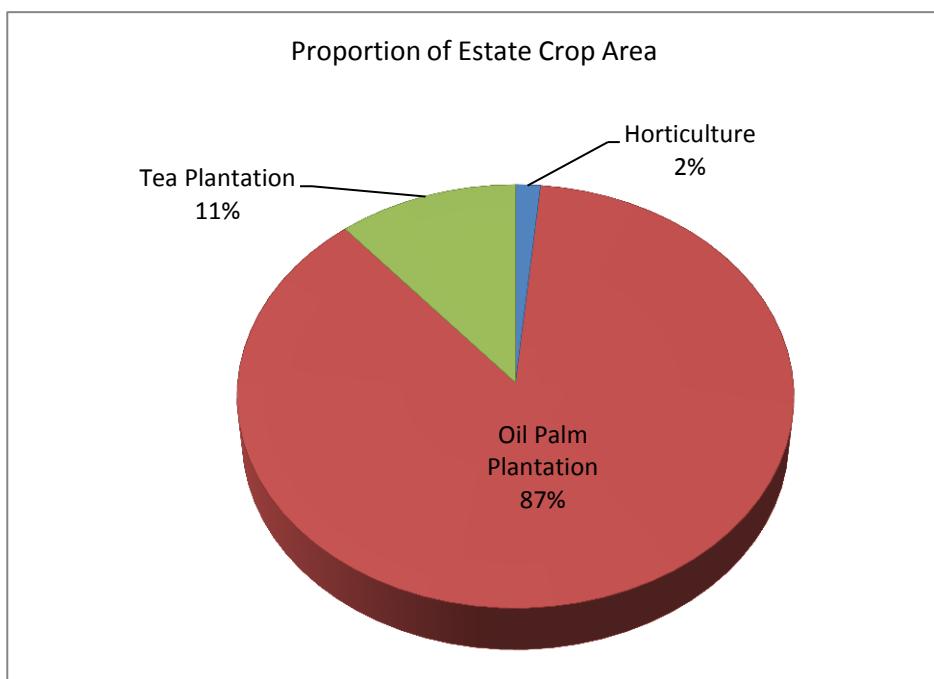
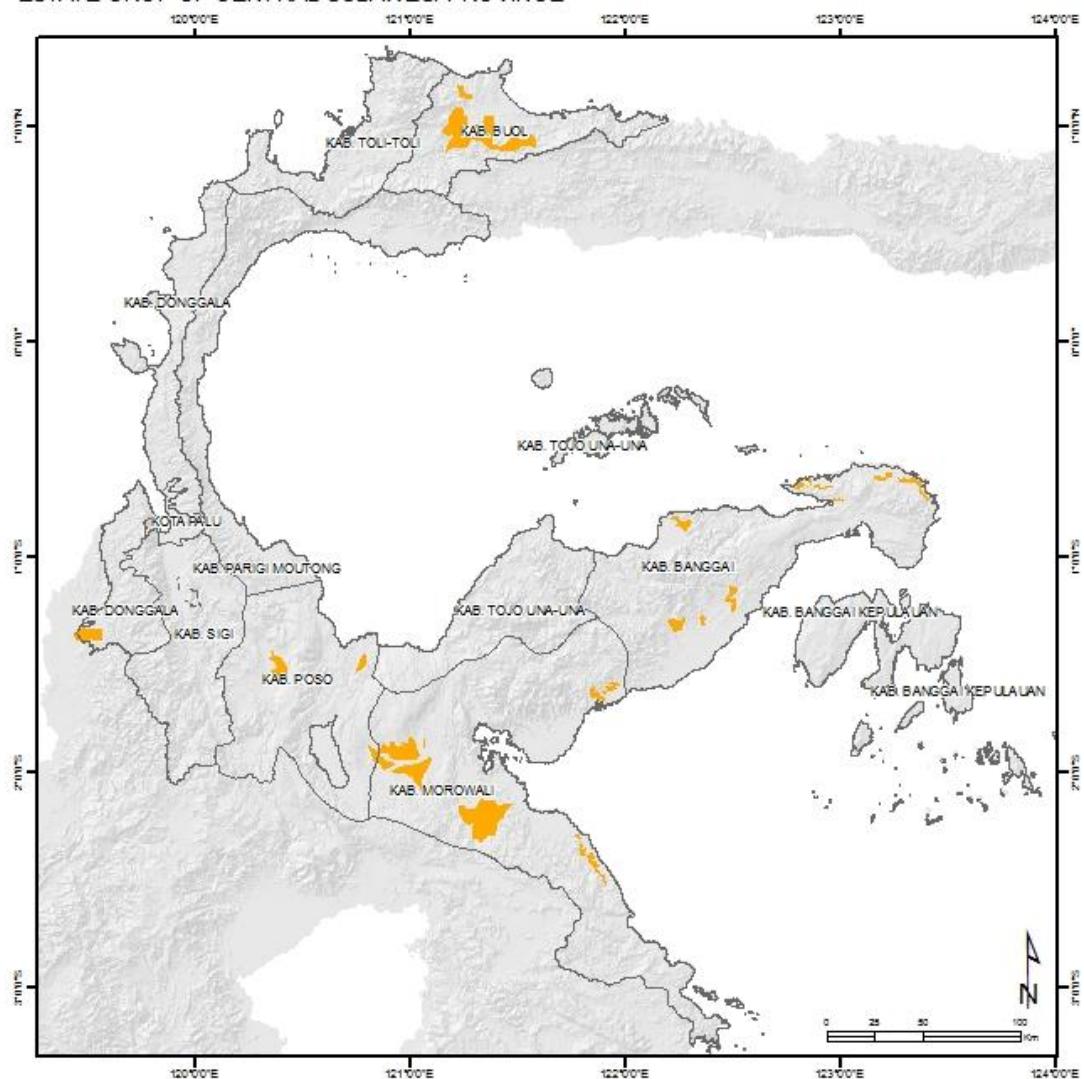


Figure 6.9 Chart of Estate Crop Area in Central Sulawesi

ESTATE CROP OF CENTRAL SULAWESI PROVINCE



■ Estate crop

UN-REDD
PROGRAMME

Sumber data:
Estate crop service, Central Sulawesi Province

Figure 6.10 Map of Estate Crop in Central Sulawesi

Table 6.10 Area of Estate Crop Central Sulawesi Tengah by District/City

District/ Subdistrict	Luas (Ha)				Total
	Oil Palm Plantation	Tea Plantation	Horticulture	No Data	
District Banggai	7014				7014
Pagimana	550				550
Toili	6464				6464
District Buol	22780.87			7312.1	30092.97
Bokat	22780.87				22780.87
Tiloan, Bunobogu, Pale				7312.1	7312.1
District Donggala	5305.48				5305.48
Banawa Selatan	244.48				244.48
Dolo	5061				5061
District Morowali	25515.34				25515.34
Bungku Barat	2692				2692
Bungku Barat, Bungku T	7239.34				7239.34
Mori Atas	15584				15584
District Parigi Moutong	95.18				95.18
Tomini	95.18				95.18
District Poso	7740				7740
Lore Utara	7740				7740
District Sigi			1063		1063
Sigi Biromaru			1063		1063
Total	60710.87	7740	1063	7312.1	76825.97

Source: Plantation Spatial data, Plantation Office of Central Sulawesi Province

6.5 Mining

Table 6.11 Area of Mine in Central Sulawesi

No	Mining	Area (Ha)
1	Batu Besi DMP	18,810
2	Batubara	32,650
3	Biji Besi DMP	22,912
4	Bijih Besi	105,604
5	Bijih Besi dan Mineral Ikutan	9,356
6	Chromite dan bahan ikutan	3,033
7	Emas	73,250
8	Emas DMP	14,250

No	Mining	Area (Ha)
9	Galena	25
10	Galian Biji Besi dan Mineral Pengikutnya	25,000
11	Galian Biji Besi, Mangan dan Mineral Pengikutnya	10,000
12	Galian Biji Galena dan Mineral Pengikutnya	15,000
13	Galian Bijih Besi dan Mineral Pengikutnya	5,000
14	Galian Galena, Cromyd dan Mineral Ikutan	10,000
15	Galian Molybdenum dan DMP	11,430
16	Galian Molybdenum dan Mineral Pengikutnya	5,170
17	Galian Pasir Batu Kerikil	442
18	Golongan C (Pasir, Batu)	79
19	Kromit	14,333
20	Logam Dasar	92,355
21	Mineral Logam (Timah)	20,116
22	Mineral Logam Mulia	8,522
23	Mofibdenum DMP	4,204
24	Molibdenum DMP	27,113
25	Mollbdenum DMP	4,453
26	Molybdenum	9,649
27	Nikel	543,270
28	Pasir Besi DMP	6,822
29	Tembaga DMP	11,547
30	No Data	371,531
Total		1,475,927

Source: Landuse spasial data, DG of Planologiof Forestry Ministry

Table 6.12 Area of Mine in Central Sulawesi by District/City and Subdistrict

No	District/Subdistrict	Area (Ha)
1	District Banggai	192,663
	Balantak	22,003
	Batui	13,945
	Batui, Toili	7,422
	Bualemo	20,125
	Bualemo, Masama dan Balantak	3,043
	Bunta	18,911
	Bunta dan Nuhon	7,285
	Luwuk Timur, Pagimana	4,066
	Masama	1,439
	Masama, Bualemo	2,753

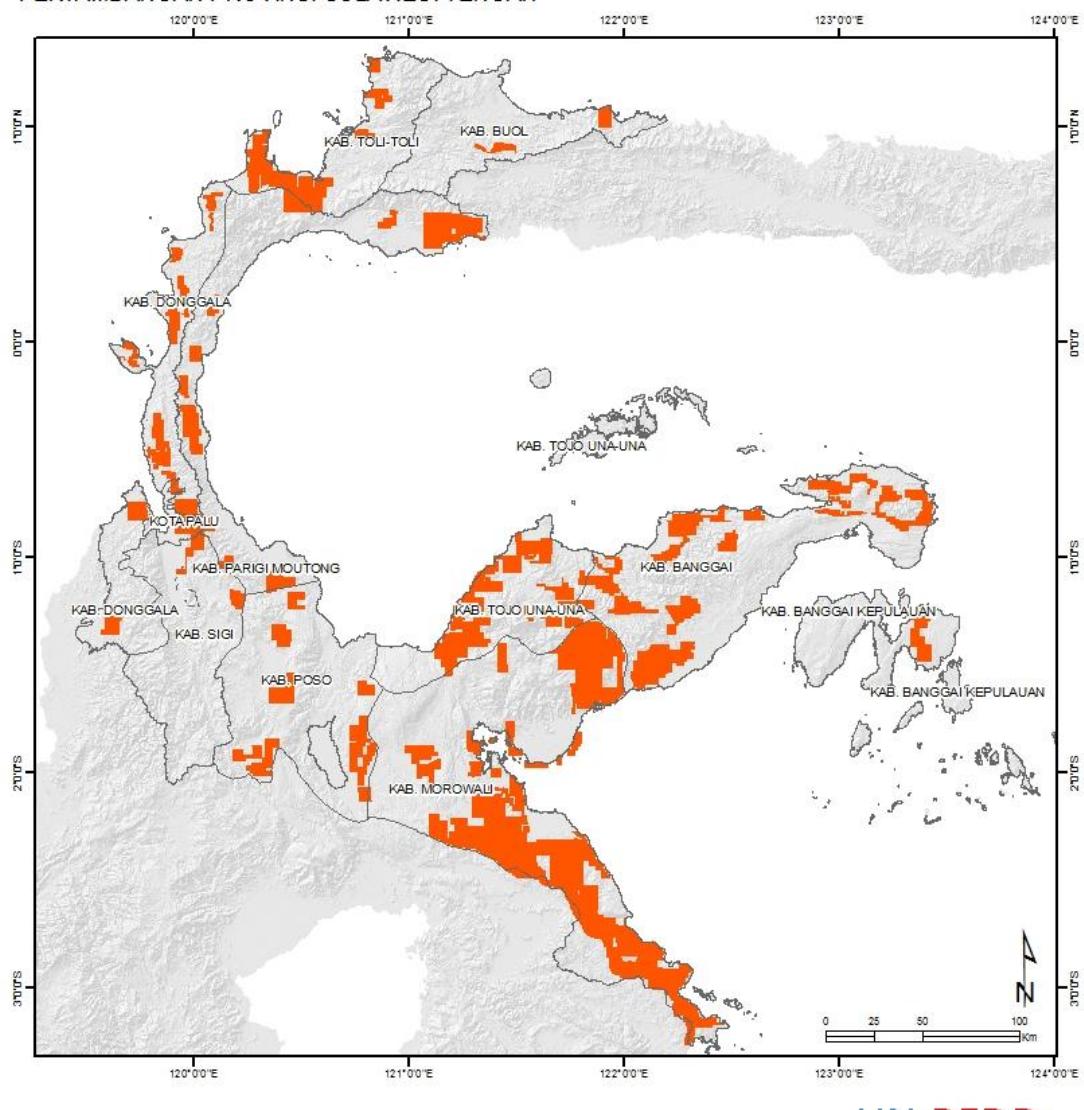
No	District/Subdistrict	Area (Ha)
	Nuhon	13,693
	Pagimana	23,455
	Pagimana Bualemo	5,000
	Pagimana dan Bualemo	2,800
	Toili Barat	38,848
	Toili Barat, Toili	7,875
2	District Banggai Kepulauan	19,650
	Tinakung Selatan	12,050
	Tinakung Utara	7,600
3	District Buol	13,907
	Bukal, Tiloan	6,516
	Paleleh Barat	7,391
4	District Donggala	111,057
	Balaesang	14,000
	Balaesang, Damsol	11,430
	Banawa	147
	Banawa Selatan	10,000
	Dampelas Sojol	5,170
	Damsol, Sojol	20,000
	Labuan	80
	Labuan, Tana Ntovea	5,000
	Rio Pakava	10,000
	Sindue	65
	Sindue Tombusabora	5,000
	Sindue Tombusuara, Sindue Tobata	15,000
	Sindue, Sindue Tombusabura	5,000
	Sirenja	90
	Sojol	45
	Sojol Utara, Sojol	10,000
	Tawaeli	30
5	District Morowali	604,634
	Bahodopi	39,979
	Bahodopi dan Bungku Tengah	32,123
	Bumi Raya	2,746
	Bungku Barat	45,541
	Bungku Selatan	44,784
	Bungku Selatan, Menui Kepulauan	5,373

No	District/Subdistrict	Area (Ha)
	Bungku Tengah	25,916
	Bungku Tengah, Bahodopi	6,006
	Bungku Tengah, Bungku Barat	9,124
	Bungku Utara	155,465
	Bungku Utara, Mamosalato	6,897
	Lembo	38,762
	Lembo dan Petasi	17
	Lembo, Witaponda	3,035
	Mamo Salato	4,205
	Mamosalato	49,645
	Mamosalato, Bungku Utara	8,917
	Menui Kepulauan	2,000
	Mori Atas	21,798
	Petasia	46,714
	Soyo jaya, Petasia	1,105
	Wita Ponda, Petasia	198
	Witaponda	39,937
	Witaponda, Bungku Barat	5,674
	Witaponda, Petasia, Lembo	8,673
6	Kota Palu	79
	Palu Barat	69
	Palu Utara	10
7	District Parigi Moutong	164,856
	Ampibabo, Toribulu	5,096
	Kasimbar	4,403
	Lambunu	5,289
	Moutong	29,640
	Moutong dan Taopa	8,522
	Palasa	28,420
	Parigi Barat	37,020
	Parigi Selatan	5,009
	Sausu	13,358
	Tinombo	7,962
	Tinombo Selatan	5,117
	Toribulu, Ampibabo	15,020
8	District Poso	109,478
	Lore Selatan	17,557

No	District/Subdistrict	Area (Ha)
	Lore Selatan, Lore Barat	9,477
	Lore Tengah	10,000
	Lore Tengah, Lore Piore, Pamona Utara	10,858
	Lore Timur, Poso Pesisir, Lore Utara	10,550
	Pamona Selatan, Pamona Tenggara	6,503
	Pamona Timur	18,419
	Pamona Timur, Pamona Tenggara	14,032
	Pamona Utara	6,156
	Poso Pesisir Utara	5,926
9	District Sigi	8,000
	Nokilalaki	8,000
10	District Tojo Una-Una	166,539
	Ampana Kota	1,180
	Ampana Kota, Ampana Tete dan Ulubongka	10,800
	Ampana Tete	33,169
	Ampana Tete dan Ampana Kota	2,500
	Ampana Tete, Ampana Kota, Ulubongka	4,883
	Tojo	45,671
	Tojo dan Tojo Barat	19,281
	Tojo dan Ulubongka	7,441
	Ulubongka	15,775
	Ulubongka & Ampana Tete	9,193
	Ulubongka dan Ampana Tete	2,486
	Ulubongka dan Tojo	4,181
	Ulubongka, Ampana Kota	9,978
11	District Tolitoli	85,065
	Dakopemean	4,885
	Dampal Selatan	4,204
	Dampal Selatan/Utara	4,693
	Dampal Utara	10,301
	Dampal Utara, Dampal	4,220
	Dondo	43,180
	Galang	9,129
	Ogodeide, Baolan	4,453
	Total	1,475,927

Sources: Mining Spatial data, the Department of Mines of Central Sulawesi Province

PERTAMBANGAN PROVINSI SULAWESI TENGAH



Sumber data:
Dinas Pertambangan, Provinsi Sulawesi Tengah

Figure 6.11 Map of Mining Area of Central Sulawesi

VII CARBON STOCK

VII. CARBON STOCK

Table 7.1 Carbon Stock based on Land use and Land Cover in Central Sulawesi

Land Use/Land Cover	Carbon Stok (ton C)				
	2000	2003	2006	2009	2011
Water Body	-	-	-	-	-
Airport	-	-	-	-	-
Shrub	3,761,663	4,276,507	5,250,054	5,306,041	5,445,139
Swamp Shrub	13,797	13,797	13,797	14,121	13,724
Primary Dryland Forest	605,740,873	543,025,813	506,131,606	501,754,891	495,346,562
Secondary Dryland Forest	225,392,349	271,951,523	290,579,328	290,569,906	290,213,948
Primary Mangrove Forest	3,600,276	3,566,795	3,302,472	3,302,472	3,302,472
Secondary Mangrove Forest	3,880,236	3,903,862	4,090,443	4,087,858	4,086,838
Primary Swamp Forest	63,605	63,605	63,605	63,605	63,605
Secondary Swamp Forest	1,207,861	1,207,861	1,196,164	1,196,164	1,196,164
Settlement	29,267	29,267	29,267	29,287	29,341
Estate Crop	7,579,875	7,580,872	7,630,273	7,967,299	7,980,838
Mining	-	-	-	-	-
Dryland Agriculture	3,276,235	3,290,567	3,334,939	3,343,338	3,427,240
Mixed Dryland Agriculture	5,482,141	5,575,148	5,652,159	5,732,193	5,877,044
Swamp	-	-	-	-	-
Grassland	139,007	139,007	139,007	139,007	139,007
Rice Field	513,725	514,820	515,277	518,936	519,108
Embankment	-	-	-	-	-
Vacant land	-	-	-	-	-
Transmigration	49,922	49,922	49,922	49,922	50,280
Total	860,730,832	845,189,366	827,978,313	824,075,038	817,691,310

Sumber: Result of Data Spasial Analysis

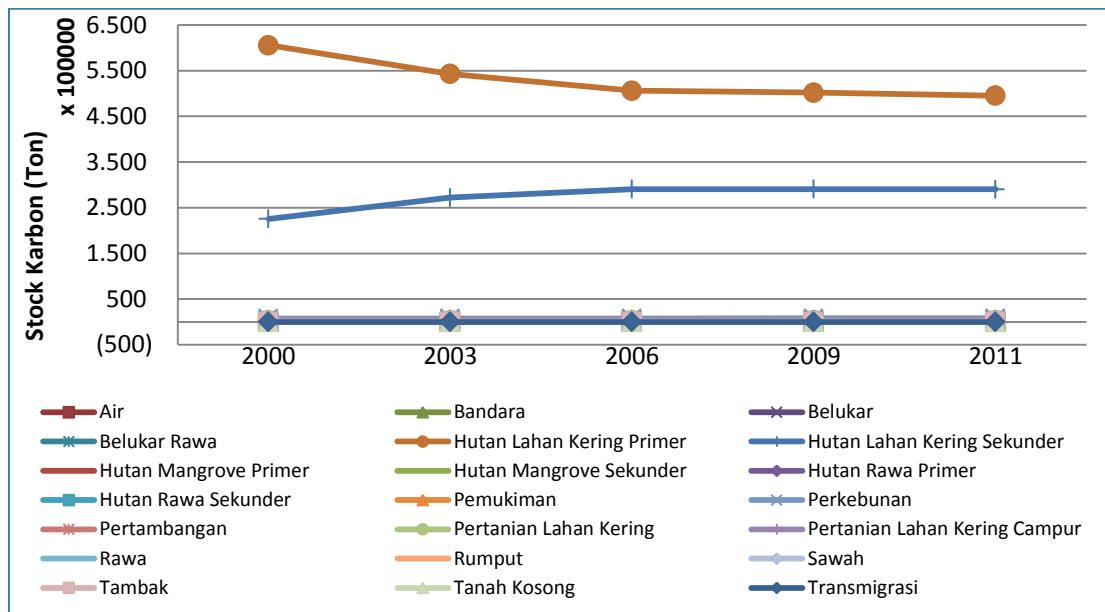


Figure 7.1 Chart of Carbon Stock Change (ton C) based on Land use/Land Cover in Central Sulawesi

Table 7.2 Carbon Stock in Central Sulawesi by District/City and Subdistrict

District	Carbon Stock (ton C)				
	2000	2003	2006	2009	2011
District Banggai	127,551,608	122,781,862	121,196,631	120,604,393	118,704,646
Balantak	7,327,633	6,941,309	6,868,636	6,690,857	6,174,695
Batui	9,017,322	8,963,703	8,964,515	8,964,515	8,461,865
Bualemo	11,573,165	10,346,565	10,334,124	10,188,645	10,181,363
Bunta	10,717,097	10,691,104	10,641,427	10,447,995	10,447,995
Kintom	8,729,707	8,729,707	8,394,946	8,394,946	8,377,679
Lamala	2,793,812	2,677,875	2,642,944	2,642,944	2,641,331
Luwuk	5,407,531	5,405,631	5,385,980	5,381,133	5,320,924
Luwuk Timur	1,500,094	1,455,376	1,388,749	1,341,993	1,341,993
Masama	2,244,897	2,239,609	2,209,851	2,205,922	2,205,922
Nuhon	22,016,230	20,442,121	20,301,260	20,277,431	19,904,260
Pagimana	24,987,076	24,954,066	24,727,416	24,724,895	24,664,187
Toili	9,026,389	8,531,275	8,503,821	8,511,268	8,225,041
Toili Barat	12,210,656	11,403,520	10,832,964	10,831,850	10,757,392
District Banggai Kepulauan	19,718,491	19,718,491	19,569,829	19,541,225	19,533,760
Banggai	1,375,716	1,375,716	1,375,716	1,375,716	1,375,716

District	Carbon Stock (ton C)				
	2000	2003	2006	2009	2011
Banggai Selatan	1,431,987	1,431,987	1,431,987	1,431,987	1,431,987
Banggai Tengah	853,954	853,954	853,954	853,954	853,954
Banggai Utara	498,893	498,893	498,893	498,893	498,893
Bangkurung	1,468,032	1,468,032	1,468,032	1,468,032	1,468,032
Bokan Kepulauan	2,431,410	2,431,410	2,413,328	2,413,328	2,413,328
Buko	1,364,830	1,364,830	1,358,757	1,358,757	1,358,757
Buko Selatan	353,169	353,169	354,214	354,214	354,214
Bulagi	2,796,196	2,796,196	2,796,196	2,767,593	2,767,593
Bulagi Selatan	1,217,726	1,217,726	1,217,726	1,217,726	1,217,726
Bulagi Utara	3,287,019	3,287,019	3,164,150	3,164,150	3,164,150
Labobo	897,301	897,301	897,301	897,301	897,301
Liang	203,446	203,446	203,446	203,446	203,446
Peling Tengah	149,155	149,155	149,155	149,155	149,155
Tinangkung	637,214	637,214	634,531	634,531	627,065
Tinangkung Selatan	284,204	284,204	284,204	284,204	284,204
Tinangkung Utara	168,727	168,727	168,727	168,727	168,727
Totikum	199,655	199,655	199,655	199,655	199,655
Totikum Selatan	99,858	99,858	99,858	99,858	99,858
District Buol	59,692,873	59,067,302	57,332,314	57,332,314	57,242,141
Biau	4,059,352	4,018,389	3,997,628	3,997,628	3,997,628
Bokat	2,763,372	2,616,825	2,598,909	2,598,909	2,598,909
Bukal	7,568,092	7,466,759	6,989,005	6,989,005	6,902,296
Bunobogu	4,880,131	4,835,292	4,789,204	4,789,204	4,789,204
Gadung	2,929,232	2,929,232	2,925,799	2,925,799	2,925,799
Keramat	1,547,538	1,528,044	1,375,152	1,375,152	1,375,152
Lipunoto	2,003,998	1,909,308	1,683,116	1,683,116	1,683,116
Momunu	1,724,833	1,686,955	1,324,143	1,324,143	1,324,143
Paleleh	2,371,794	2,371,896	2,327,494	2,327,494	2,327,494
Paleleh Barat	1,697,649	1,697,649	1,697,649	1,697,649	1,697,649
Tiloan	28,146,882	28,006,952	27,624,215	27,624,215	27,620,751
District Donggala	77,434,740	76,839,698	74,636,953	74,411,685	73,621,440
Balaseang	7,986,804	7,983,078	7,978,860	7,914,373	7,914,373
Banawa	860,600	860,600	860,600	842,300	842,300
Banawa Selatan	7,682,054	7,499,073	7,408,901	7,405,778	7,405,778
Banawa Tengah	835,039	835,039	835,039	835,039	835,039
Dampelas Sojol	6,385,825	6,384,384	6,343,552	6,285,900	6,248,566
Labuan	1,982,953	1,956,554	1,732,978	1,732,978	1,732,978

District	Carbon Stock (ton C)				
	2000	2003	2006	2009	2011
Pinembani	9,197,375	9,101,144	8,753,994	8,748,281	8,748,281
Rio Pakava	13,964,505	13,964,505	13,362,059	13,350,688	13,336,532
Sindue	1,128,914	1,124,407	828,104	828,104	828,104
Sindue Tobata	4,778,637	4,778,637	4,698,507	4,698,507	4,698,507
Sindue Tombusabora	1,880,695	1,880,695	1,686,733	1,686,733	1,686,733
Sirenja	4,936,071	4,867,104	4,867,104	4,852,237	4,841,286
Sojol	9,350,732	9,206,603	9,031,764	8,982,244	8,366,055
Sojol Utara	2,072,320	2,051,156	2,005,967	2,005,733	1,898,296
Tana Tovea	4,392,215	4,346,719	4,242,791	4,242,791	4,238,614
District Morowali	199,352,324	196,888,628	194,055,700	192,161,532	190,266,230
Bahodopi	14,755,752	14,751,320	14,745,702	14,741,849	14,680,651
Bumi Raya	610,682	581,141	581,141	581,141	581,141
Bungku Barat	12,503,630	12,392,339	12,238,066	12,049,124	12,007,602
Bungku Selatan	8,867,479	8,862,210	8,834,807	8,742,844	8,328,128
Bungku Tengah	20,864,180	20,687,885	20,585,526	20,428,483	20,411,810
Bungku Utara	37,798,514	37,418,564	37,323,485	37,226,029	37,213,735
Lembo	15,086,944	15,050,223	14,914,449	14,729,778	14,671,341
Mamo Salato	17,746,270	16,837,464	16,385,017	16,281,010	16,281,010
Menui Kepulauan	1,391,827	1,391,717	1,391,717	1,391,717	1,381,983
Mori Atas	23,678,294	23,533,150	22,664,349	22,629,058	21,514,579
Petasia	14,665,789	14,478,932	14,198,227	13,423,418	13,336,680
Soyo Jaya	20,945,865	20,508,655	19,880,023	19,653,723	19,574,217
Wita Ponda	10,437,098	10,395,029	10,313,191	10,283,358	10,283,352
District Parigi Moutong	83,433,469	81,815,023	81,500,757	81,182,845	81,126,162
Ampibabo	3,338,917	3,338,917	3,341,057	3,341,057	3,341,057
Balinggi	3,757,842	3,757,070	3,700,123	3,700,123	3,665,494
Bolano Lambunu	6,506,653	6,212,325	6,206,346	5,976,740	5,976,740
Kasimbar	3,604,849	3,603,754	3,603,754	3,603,754	3,603,754
Mepanga	627,571	627,571	610,753	610,753	610,753
Moutong	10,378,323	9,768,794	9,768,794	9,768,416	9,768,416
Palasa	14,812,766	14,296,264	14,296,264	14,296,264	14,296,264
Parigi	111,440	111,440	108,399	107,798	107,863
Parigi Barat	1,888,896	1,888,896	1,854,049	1,841,968	1,841,968
Parigi Selatan	3,302,195	3,302,195	3,299,278	3,299,278	3,299,278
Parigi Tengah	1,279,359	1,279,359	1,279,359	1,279,314	1,279,314
Parigi Utara	719,520	713,702	713,702	713,702	697,938
Sausu	2,692,656	2,692,656	2,687,728	2,687,728	2,681,372

District	Carbon Stock (ton C)				
	2000	2003	2006	2009	2011
Siniu	892,565	891,145	891,145	891,145	891,145
Taopa	5,393,813	5,320,728	5,320,728	5,255,961	5,255,961
Tinombo	8,150,026	8,049,069	7,916,215	7,905,782	7,905,782
Tinombo Selatan	5,849,982	5,849,982	5,847,918	5,847,918	5,847,918
Tomini	4,304,792	4,289,852	4,233,841	4,233,841	4,233,841
Toribulu	2,584,459	2,584,459	2,584,459	2,584,459	2,584,459
Torue	3,236,846	3,236,846	3,236,846	3,236,846	3,236,846
District Poso	97,173,919	95,850,600	94,798,377	94,435,129	93,755,717
Lage	3,673,298	3,226,286	3,229,429	3,229,429	3,188,965
Lore Barat	5,487,010	5,486,711	5,484,739	5,484,739	5,484,739
Lore Peore	5,056,016	5,056,016	5,056,016	5,056,016	5,056,016
Lore Selatan	10,552,644	10,527,833	10,527,833	10,527,833	10,527,833
Lore Tengah	10,209,516	10,209,516	10,209,516	10,209,516	10,209,516
Lore Timur	972,917	972,917	972,917	972,917	972,917
Lore Utara	9,373,892	9,347,940	9,347,940	9,347,940	9,347,940
Pamona Barat	3,380,362	3,380,362	3,282,034	3,282,034	3,282,034
Pamona Selatan	5,094,647	5,094,647	4,995,867	4,800,793	4,800,793
Pamona Tenggara	1,291,197	1,291,197	1,281,963	1,281,963	1,281,963
Pamona Timur	6,302,776	6,278,608	6,195,403	6,195,017	6,195,017
Pamona Utara	14,782,157	14,447,804	14,353,531	14,353,531	14,119,912
Poso Kota	164,409	159,793	159,793	159,793	159,793
Poso Kota Selatan	357,413	259,594	259,594	259,594	259,594
Poso Kota Utara	310,580	166,431	166,431	166,431	166,431
Poso Pesisir	5,291,269	5,291,269	5,137,891	5,137,891	5,115,115
Poso Pesisir Selatan	6,340,380	6,229,996	5,860,943	5,860,943	5,851,689
Poso Pesisir Utara	8,533,437	8,423,682	8,276,537	8,108,750	7,735,451
District Sigi	74,114,020	73,779,515	72,771,192	72,649,688	72,467,442
Dolo Barat	833,347	833,347	833,347	833,347	833,347
Dolo Selatan	2,860,242	2,860,242	2,860,242	2,850,963	2,850,963
Gumbasa	1,323,874	1,323,874	1,323,874	1,321,763	1,321,763
Kinovaro	3,162,086	3,084,570	2,925,687	2,880,482	2,880,482
Kulawi	18,985,155	18,948,667	18,546,903	18,468,185	18,416,622
Kulawi Selatan	7,347,665	7,328,713	7,318,175	7,327,436	7,284,149
Lindu	4,777,685	4,777,685	4,777,685	4,777,685	4,777,685
Marawola	372,596	372,596	372,593	372,593	372,593
Marawola Barat	2,759,110	2,641,741	2,545,237	2,545,237	2,545,237
Nakilalaki	3,601,139	3,562,317	3,562,317	3,562,317	3,562,317

District	Carbon Stock (ton C)				
	2000	2003	2006	2009	2011
Palolo	2,005,750	2,005,750	2,005,750	2,005,750	2,005,750
Pipikoro	16,645,351	16,602,420	16,560,122	16,564,670	16,498,202
Sigi Biromaru	8,183,260	8,180,831	7,882,499	7,882,499	7,861,572
Tanambulava	1,256,760	1,256,760	1,256,760	1,256,760	1,256,760
District Tojo Una-Una	70,441,658	67,863,667	63,771,889	63,481,565	63,067,654
Ampana Kota	2,810,751	2,723,440	2,098,916	2,095,523	2,089,159
Ampana Tete	12,676,200	11,116,960	11,083,952	11,083,952	11,009,783
Togian	2,084,547	2,084,547	2,084,547	2,084,547	2,056,426
Tojo	17,268,155	17,245,869	15,843,091	15,754,298	15,647,980
Tojo Barat	8,303,606	8,276,621	8,018,194	8,018,194	8,018,194
Ulubongka	20,179,705	19,297,537	18,047,922	17,849,786	17,675,705
Unauna	4,951,326	4,951,326	4,427,898	4,427,898	4,413,913
Walea Besar	504	504	504	504	504
Walea Kepulauan	2,166,864	2,166,864	2,166,864	2,166,864	2,155,991
District Toli-Toli	48,519,341	47,303,536	45,260,663	45,217,666	45,160,909
Baolan	8,573,403	8,466,251	8,027,891	8,027,891	8,009,954
Basidondo	8,992,340	8,449,488	8,070,046	8,033,017	8,033,017
Dakopemean	2,550,171	2,550,171	2,381,770	2,381,770	2,381,770
Dampal Selatan	2,239,891	2,239,891	2,239,891	2,239,891	2,229,207
Dampal Utara	2,461,539	2,461,539	2,107,943	2,107,943	2,107,943
Dondo	5,377,083	4,961,653	4,894,763	4,894,763	4,888,352
Galang	5,929,975	5,929,975	5,781,435	5,781,435	5,781,435
Lampasio	4,335,627	4,325,604	4,166,819	4,165,945	4,165,880
Ogodeide	3,078,250	2,940,636	2,770,815	2,765,722	2,755,373
Tolitoli Utara	4,981,062	4,978,329	4,819,289	4,819,289	4,807,978
Kota Palu	3,283,833	3,271,929	3,075,037	3,048,023	2,736,236
Palu Barat	587,685	587,685	587,685	560,849	560,849
Palu Selatan	538,620	536,537	497,621	497,621	328,483
Palu Timur	1,783,999	1,783,999	1,680,296	1,680,118	1,537,473
Palu Utara	373,529	363,707	309,436	309,436	309,431
(No Data)	14,556	9,115	8,972	8,972	8,972
Total	860,730,832	845,189,366	827,978,313	824,075,038	817,691,310

Source: Result of Data Spasial Analysis

Table 7.3 Carbon Stock based on Land use-Land Cover by District/City and Subdistrict 2011

District/ Subdistrict	Stock Carbon (Ton C) 2011									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
District Banggai	-	-	1,257,885	3,497	56,026,476	56,611,082	152,630	1,147,575		82,585
Balantak	-		97,850		973,870	4,842,191	43	20,500		
Batui	-		268,798		2,354,612	5,174,718		187,577		
Bualemo	-		226,196	3,497	6,189,908	3,398,384	87	265,329		
Bunta			22,521		6,774,040	3,165,644		24,043		
Kintom	-		86,833		4,806,583	3,349,586		24,616		
Lamala			11,968		1,099,525	1,142,732		19,593		59,873
Luwuk		-	108,620		3,838,643	1,222,022				
Luwuk Timur			11,389		568,508	416,162		120,923		
Masama			370		1,325,155	697,638		72,247		22,712
Nuhon	-		155,185		5,602,170	13,778,971	62,350	6,571		
Pagimana	-		89,365		18,005,759	6,345,635	90,149	53,635		
Toili	-		56,271		1,416,813	6,207,174		111,684		
Toili Barat	-		122,521		3,070,891	6,870,224		240,857		
District Banggai Kepulauan	-		110,032		5,792,606	10,207,987	616,485	782,027		
Banggai	-					1,361,216				
Banggai Selatan						1,423,016		6,209		
Banggai Tengah					760	848,329		1,545		
Banggai Utara	-					449,297	18,040	17,371		

District/ Subdistrict	Stock Carbon (Ton C) 2011									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Bangkurung	-				13,345	1,140,424	230,447	39,259		
Bokan Kepulauan	-		16,654		500	1,628,393	317,103	382,268		
Buko			9,341		436,382	763,350		14,575		
Buko Selatan			2,310			67,340		90,170		
Bulagi	-		948		2,316,139	293,992		143		
Bulagi Selatan					789,327	252,300				
Bulagi Utara	-		9,973		2,099,382	771,461		85,413		
Labobo	-				197	789,806	50,895	36,922		
Liang			65,281		1,772	43,540		3,957		
Peling Tengah			5,207			20,554		9,415		
Tinangkung					134,804	310,084		8,830		
Tinangkung Selatan			299			3,782		68,756		
Tinangkung Utara	-					1,007		14,747		
Totikum	-									
Totikum Selatan	-		18			40,096		2,447		
District Buol	-	225,468		39,917,556	14,803,312	137,178	4,961		99,494	
Biau		17,190		2,159,000	1,783,652					
Bokat	-	26,994		1,366,949	1,167,310		7,281		2,026	
Bukal		56,323		3,732,353	2,378,192					
Bunobogu	-	9,690		3,941,229	712,699	100,114				

District/ Subdistrict	Stock Carbon (Ton C) 2011									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Gadung	-		2,670		2,771,859	97,818	9,621			
Keramat			23,722		769	1,304,803	12,710			
Lipunoto	-		19,523		233,829	1,285,618				99,494
Momunu	-		30,985		147,259	653,560				
Paleleh	-		14,288		713,485	1,501,431	7,451		2,935	
Paleleh Barat	-		6,725		1,541,072	81,034				
Tiloan	-		17,358		23,309,753	3,837,196				
District Donggala	-		313,812	323	43,311,133	28,773,886	87,544	41,998		
Balaseang	-		6,880	323	3,708,281	4,151,431	21,335	16,033		
Banawa			35,124		34,289	743,310		2,275		
Banawa Selatan	-		10,739		1,182,144	6,074,579		12,213		
Banawa Tengah	-		26		102,154	709,005				
Dampelas Sojol	-		34,022		4,034,751	1,962,243	9,931	5,131		
Labuan	-		24,057		1,461,926	231,448				
Pinembani			19,327		5,329,488	3,399,465				
Rio Pakava	-		22,697		8,833,572	4,175,812				
Sindue	-		31,474		127,492	651,505				
Sindue Tobata	-		7,770		3,915,932	772,625				
Sindue Tombusabura	-		19,785		1,169,557	492,304				
Sirenga	-		13,036		3,719,576	1,092,681				

District/ Subdistrict	Stock Carbon (Ton C) 2011									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Sojol	-		35,198		5,821,269	2,152,805	52,380	6,345		
Sojol Utara	-		13,304		658,034	1,194,625	3,898			
Tana Tovea	-		40,372		3,212,665	970,049				
District Morowali	-	1,006,772	4,955	129,201,254	54,047,281	1,390,325	779,625	63,605	137,061	
Bahodopi	-		3,274		13,416,934	1,176,535	34,509	4,156		
Bumi Raya	-		15,635			36,806	76,445	163,290		
Bungku Barat	-		59,042		10,325,127	1,394,032				
Bungku Selatan			38,466		6,709,292	1,215,333	166,702	138,146		
Bungku Tengah	-		13,867		16,417,711	3,712,944	82,937			
Bungku Utara	-		146,597		28,684,948	6,811,671	753,486	37,801		
Lembo	-		56,864		11,039,285	3,129,882				
Mamo Salato	-		130,629		6,298,862	9,626,926	23,077	51,267		
Menui Kepulauan	-		9		1,349,309	11,381	19,468			
Mori Atas	-		234,955		2,128,313	18,770,642				
Petasia	-		166,438	4,955	7,121,360	5,021,969	17,697	254,446	63,605	137,061
Soyo Jaya	-		127,435		17,058,624	2,093,523	214,556			
Wita Ponda			13,561		8,651,490	1,045,637	1,448	130,519		
District Parigi Moutong	-	511,113	1,850	47,371,000	30,376,813	473,181	449,408			
Ampibabo			15,144		1,389,993	1,884,757	4,444	2,607		
Balinggi	-		11,773		2,986,881	531,141	10,361	22,125		

District/ Subdistrict	Stock Carbon (Ton C) 2011									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Bolano Lambunu	-		159,622	1,850	3,021,986	2,127,903	156,098	112,524		
Kasimbar	-		4,099		2,004,436	1,557,515	1,210	3,333		
Mepanga			36,028		302,188	196,167		5,869		
Moutong	-		35,327		5,811,292	3,311,357	42,171	147,935		
Palasa	-		128,347		5,049,078	9,058,326		5,179		
Parigi	-		3,907		8,139	26,069				
Parigi Barat					1,498,458	331,621				
Parigi Selatan			33,224		3,100,411	119,749				
Parigi Tengah					1,240,837	23,089				
Parigi Utara			286		519,476	158,278				
Sausu	-		32,692		30,634	2,539,046	18,492	34,131		
Siniu					830,653	40,136				
Taopa	-		11,172		3,094,253	1,658,438	199,813	41,024		
Tinombo	-		21,058		5,259,167	2,508,349	2,735	6,806		
Tinombo Selatan	-		4,713		3,641,190	2,097,847	32,074	38,478		
Tomini			10,664		2,662,139	1,442,057		2,178		
Toribulu	-				1,743,684	751,527	5,783	27,220		
Torque			3,057		3,176,106	13,442				
District Poso	-		388,787		66,360,494	25,768,076		146,441		
Lage	-		26,831		1,633,471	1,456,809				

District/ Subdistrict	Stock Carbon (Ton C) 2011									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Lore Barat	-		10,324		5,088,897	371,335				
Lore Peore			868		5,004,817	865				
Lore Selatan	-		54,256		9,154,368	1,313,089				
Lore Tengah			3,999		9,659,086	509,044				
Lore Timur	-				911,721					
Lore Utara			7,048		8,581,584	699,259				
Pamona Barat	-				2,467,023	754,574				
Pamona Selatan	-		2,048		598,189	4,092,471				
Pamona Tenggara	-		5,855		7,467	1,220,851				
Pamona Timur	-		39,745		2,011,484	4,089,121				
Pamona Utara	-		62,604		7,776,221	6,145,812				
Poso Kota	-		448		3	123,780				
Poso Kota Selatan	-		10,613		43,674	168,424				
Poso Kota Utara	-		18,313		4,331	32,856			64,006	
Poso Pesisir	-		64,675		4,694,001	250,133			31,260	
Poso Pesisir Selatan	-		23,013		5,582,563	112,741				
Poso Pesisir Utara	-		58,148		3,141,591	4,426,910			51,175	
District Sigi	-		585,707		60,738,345	10,537,295				
Dolo Barat	-		10,655		700,088	70,370				
Dolo Selatan	-		32,961		2,612,778	175,710				

District/ Subdistrict	Stock Carbon (Ton C) 2011									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Gumbasa	-		13,463		1,286,904	13,940				
Kinovaro	-		115,083		1,219,080	1,541,065				
Kulawi	-		163,205		16,692,372	1,486,676				
Kulawi Selatan	-		14,640		6,974,919	263,988				
Lindu	-		9,593		4,179,834	562,212				
Marawola	-		13,860			245,129				
Marawola Barat			27,071		1,057,596	1,460,569				
Nakilalaki			2,696		2,928,806	594,281				
Palolo	-		11,739		1,872,578	75,676				
Pipikoro	-		131,269		14,146,381	2,151,575				
Sigi Biromaru	-		18,838		5,877,570	1,878,589				
Tanambulava	-		20,635		1,189,437	17,516				
District Tojo Una-Una	-		654,355		22,395,441	38,238,166	211,474	667,339		
Ampana Kota			62,843			1,854,908				
Ampana Tete	-		71,451			10,826,957			3,353	
Togian			19,242			1,619,954	30,538	338,510		
Tojo	-		134,171		13,755,516	1,600,051	822	3,808		
Tojo Barat			23,187		443,435	7,442,762		11,673		
Ulubongka	-		245,818		8,025,334	9,110,649				
Unauna	-		74,420		159,657	3,855,334	180,113	126,921		

District/ Subdistrict	Stock Carbon (Ton C) 2011									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Walea Besar									504	
Walea Kepulauan			23,224		11,499	1,927,551			182,569	
District Toli-Toli	-		292,190	3,098	23,029,512	19,467,197	233,657	67,463		877,023
Baolan	-		57,088		4,341,776	3,477,484	17,476		623	
Basidondo	-		63,142		4,942,989	2,906,369	13,470			
Dakopemean					1,549,702	777,615	10,970		8,571	
Dampal Selatan			8,995		1,095,868	813,900	6,127			
Dampal Utara	-		59,922			2,028,278	2,721			
Dondo	-		26,407		3,121,031	1,650,369	9,001			
Galang			19,456		4,542,159	981,023	14,091			
Lampasio	-		3,148		1,478,985	2,003,642		7,001		592,474
Ogodeide	-		45,630	3,098		2,140,817	139,234	42,371		284,550
Tolitoli Utara	-		8,401		1,957,002	2,687,700	20,566	8,897		
Kota Palu	-	-	96,848		1,202,744	1,378,541				
Palu Barat	-		36,139		76,148	442,842				
Palu Selatan	-	-	11,649		121,354	180,746				
Palu Timur	-		17,994		949,128	564,672				
Palu Utara	-		31,065		56,113	190,282				
No Data	-		2,170			4,312				
Total	-	-	5,445,139	13,724	495,346,562	290,213,948	3,302,472	4,086,838	63,605	1,196,164

Source: Result of Spasial data Analysis

Tabel 7.4 (Continued). Carbon Stock based on Land Use-Land Cover by District/City and Subdistrict 2011

District/ Subdistrict	Stock Carbon (Ton C) 2011										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans Migration
District Banggai	2,840	1,971,201		307,686	1,061,248	-		58,911	-	-	21,030
Balantak	283	106,213		4,375	129,369	-					-
Batui	7	323,000		37,556	107,822			7,776	-	-	
Bualemo	188			39,672	53,625	-		4,476			
Bunta	103	348,202		7,520	91,467			5,453			9,001
Kintom	85	4,825		18,785	86,366						
Lamala	260	128,564		2,412	174,448	-		1,956			
Luwuk	1,222			47,970	102,447						
Luwuk Timur	16	111,962		6,009	106,526			499			
Masama	2			6,334	69,959			11,506			
Nuhon	98	213,393		45,828	36,732			1,513			1,448
Pagimana	494	18,235		28,310	31,586			1,019			
Toili	82	329,921		29,161	46,686			16,669			10,581
Toili Barat		386,887		33,754	24,215			8,045			
District Banggai Kepulauan	1,445	60,797		171,630	1,790,750	-					-
Banggai	154			504	13,843						
Banggai Selatan	33				2,730						
Banggai Tengah				452	2,868						
Banggai Utara	51			155	13,978						

District/ Subdistrict	Stock Carbon (Ton C) 2011										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans Migration
Bangkurung	89			7,157	37,312					-	
Bokan Kepulauan	172			12,265	55,972	-					
Buko	142			2,836	132,131						
Buko Selatan	40			9,175	185,179						
Bulagi	57			17,471	138,843						
Bulagi Selatan	19			60,025	116,055						
Bulagi Utara	116			3,119	194,685						
Labobo	107				19,375						
Liang	27			2,995	85,874						
Peling Tengah	9			585	113,384						
Tinangkung	102			6,815	166,431						
Tinangkung Selatan	11	60,797		3,383	147,177						
Tinangkung Utara	92				152,882						
Totikum	190			11,099	188,367						
Totikum Selatan	37			33,593	23,666						
District Buol	1,435	1,652,233		182,256	202,592			15,657	-		
Biau	247			6,351	29,683			1,505			
Bokat	309	8,061		888	14,222			4,868			
Bukal	57	720,612		5,908	8,614			238			
Bunobogu	69			23,599	1,458			346	-		
Gadung	65			43,767					-		

District/ Subdistrict	Stock Carbon (Ton C) 2011										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans Migration
Keramat	123			14,458	18,567						
Lipunoto	314	3,399		30,586	7,962				2,391		
Momunu	108	423,243		17,321	48,576				3,093		
Paleleh	76	35,787		13,888	36,872				1,281		
Paleleh Barat	68	29,151		25,363	14,045				191		
Tiloan		431,980		128	22,591				1,743		
District Donggala	3,556	533,101	-	346,575	164,891	-		43,104	-	-	1,516
Balaseang	843			3,784	1,457				4,006		
Banawa	306			19,612	7,384						
Banawa Selatan	136	103,131		739	18,391	-			3,707	-	
Banawa Tengah	98	13,148		8,416	2,192						
Dampelas Sojol	570	43,147		118,768	25,401				13,086	-	1,516
Labuan	202			14,197	11				1,138	-	
Pinembani											
Rio Pakava		218,227		73,494	12,700				30		
Sindue	188			16,250					1,193		
Sindue Tobata	185			1,084	910						
Sindue Tombusabora	51			5,037							
Sirenja	391			7,863	1,800				5,939		
Sojol	413	155,449		50,182	81,352				10,662	-	
Sojol Utara	138			15,783	9,170				3,343	-	

District/ Subdistrict	Stock Carbon (Ton C) 2011										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans Migration
Tana Tovea	35		-	11,369	4,123						
District Morowali	3,202	2,018,407	-	599,673	822,727		127,010	63,682		-	650
Bahodopi	13		-	14,043	29,351			1,835		-	
Bumi Raya	544	239,570		362	47,038			1,452			
Bungku Barat	178	101,244		7,357	117,468			3,154			
Bungku Selatan	169			7,273	52,748				-		
Bungku Tengah	397			33,069	144,594			6,000	-		292
Bungku Utara	190	628,971		92,918	55,667			1,487	-		
Lembo		254,174		116,734	65,601			8,802			
Mamo Salato				75,609	72,245			2,395			
Menui Kepulauan	2				1,814						
Mori Atas	1,068		-	162,846	88,091		117,899	10,407	-		358
Petasia	373	384,169		44,695	105,637		6,189	8,085	-		
Soyo Jaya	247			25,436	31,408		2,922	20,065			
Wita Ponda	21	410,278		19,331	11,065						
District Parigi Moutong	4,022	924,160		237,918	605,477	-		150,996	-	-	20,224
Ampibabo	395				43,717						
Balinggi					61,106			42,096	-		12
Bolano Lambunu	442	208,241		43,915	90,159	-		40,070	-	-	13,931
Kasimbar	241			14,159	13,615			5,146			
Mepanga	102	68,810		104	171			1,315			

District/ Subdistrict	Stock Carbon (Ton C) 2011										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans Migration
Moutong	711	349,908		13,131	55,200			1,386	-	-	
Palasa	340	29,156		3,771	21,119			948			
Parigi	224			38,926	17,946			12,651			
Parigi Barat				2,851	8,795			242			
Parigi Selatan	59			9,821	18,748			17,266			
Parigi Tengah	84			8,157	7,147						
Parigi Utara	60			15,965	3,874						
Sausu	0			1,023	20,546			2,582	-		2,227
Siniu	107			579	19,670						
Taopa	86	195,374		38,126	11,163			2,459	-	-	4,054
Tinombo	630			11,721	92,958			2,359			
Tinombo Selatan	71			22,523	3,341			7,681	-		
Tomini	162	72,671		2,792	39,740			1,438			
Toribulu	199			5,418	47,088			3,539	-		
Torue	109			4,938	29,377			9,817			
District Poso	2,390	130,550	-	559,512	361,107			32,516	-	-	5,845
Lage	61	2,372		39,295	29,196			931			
Lore Barat				7,763	4,954			1,466			
Lore Peore	21			45,270	4,092			83			
Lore Selatan				2,034	26			4,059			
Lore Tengah			-	17,943	13,775			5,669			

District/ Subdistrict	Stock Carbon (Ton C) 2011										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans Migration
Lore Timur				50,583	7,332			3,280		-	
Lore Utara				36,826	21,531			1,692			
Pamona Barat	135			5,153	49,529			5,619		-	
Pamona Selatan	64			89,107	18,914						
Pamona Tenggara				47,720	13			57			
Pamona Timur	418			22,718	28,069			3,462		-	
Pamona Utara	993			79,317	48,735			1,516		-	4,713
Poso Kota	332			18,039	17,190						
Poso Kota Selatan	80	11,440		1,701	23,662						
Poso Kota Utara	209	33,088		2,379	11,248						
Poso Pesisir	41	9,643		38,945	23,882			2,535		-	
Poso Pesisir Selatan	36	74,007		34,206	22,896			1,094		-	1,132
Poso Pesisir Utara				20,512	36,062			1,052		-	
District Sigi	666			168,968	342,242		11,996	82,224		-	
Dolo Barat	23			35,923	10,407			5,882			
Dolo Selatan				7,341	20,674			1,501			
Gumbasa				2,119	5,337						
Kinovaro				710	3,764			779			
Kulawi				31,867	38,846			3,657			
Kulawi Selatan	24			22	27,227			3,328		-	
Lindu				11,985	9,821			4,240			

District/ Subdistrict	Stock Carbon (Ton C) 2011										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans Migration
Marawola	155			36,699	52,751		3,592	20,407		-	
Marawola Barat											
Nakilalaki	131			2,844	27,021			6,539			
Palolo	50				36,102			9,606			
Pipikoro	19			17,638	45,251			6,070			
Sigi Biromaru	263			14,737	50,507		7,020	14,048		-	
Tanambulava	0			7,084	14,535		1,384	6,168			
District Tojo Una-Una	2,329	119,223		484,039	292,128			3,161		-	
Ampana Kota	157	75,228		60,344	35,440			240			
Ampana Tete	416			62,229	45,375					-	
Togian	11			7,121	41,050						
Tojo	1,243	43,995		51,368	55,202			1,803		-	
Tojo Barat	64			85,583	10,404			1,087			
Ulubongka	284			202,673	90,916			30		-	
Unauna	154			10,896	6,417					-	
Walea Besar											
Walea Kepulauan				3,825	7,324						
District Toli-Toli	3,484	571,166		321,288	227,459	-		66,356	-	-	1,015
Baolan	792	84,574		11,044	10,732			8,366		-	
Basidondo	136	31,140		38,136	37,097			537		-	
Dakopemean	155			17,887	14,886			1,986			

District/ Subdistrict	Stock Carbon (Ton C) 2011										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans Migration
Dampal Selatan	328	262,368		28,509	2,705			10,406	-		
Dampal Utara	558	6,358		6,838	1,763	-		1,505	-		
Dondo	457			38,288	33,823			8,974	-		
Galang	535	150,995		44,824	4,676			23,677	-		
Lampasio	51	14,118		53,128	7,986			4,331			1,015
Ogodeide	80	2,103		48,342	46,018	-		3,129	-		
Tolitoli Utara	392	19,511		34,291	67,773			3,445	-		
Kota Palu	3,865		-	45,793	5,968			2,476	-	-	
Palu Barat	1,149			2,547				2,023			
Palu Selatan	1,874		-	12,403	4			453			
Palu Timur	546		-	1,406	3,726				-		
Palu Utara	296		-	29,437	2,238				-		
No Data	108			1,902	454			26	-		
Total	29,341	7,980,838	-	3,427,240	5,877,044	-	139,007	519,108	-	-	50,280

Source: Result of Data Spasial Analysis

Table 7.5 Carbon Stock based on Land Use-Land Cover by District/City and Subdistrict 2009

District/ Subdistrict	Stock Carbon (Ton C) 2009									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
District Banggai	-	-	1,206,640	3,894	59,651,828	54,991,088	152,630	1,147,575		82,585
Balantak	-		93,756		4,577,283	1,759,035	43	20,500		
Batui	-		262,358		2,354,612	5,710,843			187,577	
Bualemo	-		226,196	3,894	6,194,650	3,400,659	87	265,329		
Bunta			22,521		6,774,040	3,165,644		24,043		
Kintom	-		85,159		4,806,583	3,368,526		24,616		
Lamala			11,968		1,111,787	1,132,083		19,593		59,873
Luwuk		-	108,620		3,838,643	1,285,325				
Luwuk Timur			11,389		568,508	416,162		120,923		
Masama			370		1,325,155	697,638		72,247		22,712
Nuhon	-		120,876		5,602,170	14,187,661	62,350	6,571		
Pagimana	-		89,365		18,010,694	6,405,169	90,149	53,635		
Toili	-		56,271		1,416,813	6,511,324			111,684	
Toili Barat	-		117,792		3,070,891	6,951,019		240,857		
District Banggai Kepulauan	-		110,032		5,792,606	10,215,822	616,485	782,027		
Banggai	-					1,361,216				
Banggai Selatan						1,423,016		6,209		
Banggai Tengah					760	848,329		1,545		

District/ Subdistrict	Stock Carbon (Ton C) 2009									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Banggai Utara	-					449,297	18,040	17,371		
Bangkurung	-				13,345	1,140,424	230,447	39,259		
Bokan Kepulauan	-	16,654			500	1,628,393	317,103	382,268		
Buko		9,341			436,382	763,350			14,575	
Buko Selatan		2,310				67,340		90,170		
Bulagi	-	948		2,316,139		293,992			143	
Bulagi Selatan				789,327		252,300				
Bulagi Utara	-	9,973		2,099,382		771,461		85,413		
Labobo	-			197	789,806		50,895	36,922		
Liang		65,281		1,772		43,540		3,957		
Peling Tengah		5,207				20,554		9,415		
Tinangkung				134,804		317,919		8,830		
Tinangkung Selatan		299				3,782		68,756		
Tinangkung Utara	-					1,007		14,747		
Totikum	-									
Totikum Selatan	-	18				40,096		2,447		
District Buol	-	219,183		40,110,343	14,706,984	137,178	4,961			99,494
Biau		17,190		2,159,000	1,783,652					
Bokat	-	26,994		1,366,949	1,167,310		7,281	2,026		
Bukal		50,038		3,898,797	2,304,741					

District/ Subdistrict	Stock Carbon (Ton C) 2009									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Bunobogu	-		9,690		3,941,229	712,699	100,114			
Gadung	-		2,670		2,771,859	97,818	9,621			
Keramat			23,722		769	1,304,803	12,710			
Lipunoto	-		19,523		233,829	1,285,618				99,494
Momunu	-		30,985		147,259	653,560				
Paleleh	-		14,288		713,485	1,501,431	7,451	2,935		
Paleleh Barat	-		6,725		1,541,072	81,034				
Tiloan	-		17,358		23,336,096	3,814,319				
District Donggala	-		311,547	323	44,048,617	28,868,361	87,544	43,018		
Balaseang	-		6,880	323	3,708,281	4,151,431	21,335	16,033		
Banawa			35,124		34,289	743,310		2,275		
Banawa Selatan	-		10,739		1,182,144	6,074,579		12,213		
Banawa Tengah	-		26		102,154	709,005				
Dampelas Sojol	-		36,422		4,040,110	1,995,067	9,931	5,131		
Labuan	-		24,057		1,461,926	231,448				
Pinembani			19,327		5,329,488	3,399,465				
Rio Pakava	-		21,324		8,833,572	4,191,340				
Sindue	-		31,474		127,492	651,505				
Sindue Tobata	-		7,770		3,915,932	772,625				
Sindue Tombusabora	-		19,785		1,169,557	492,304				

District/ Subdistrict	Stock Carbon (Ton C) 2009									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Sirenja	-		13,036		3,719,576	1,104,119				
Sojol	-		31,905		6,521,633	2,100,909	52,380		7,365	
Sojol Utara	-		13,304		658,034	1,308,789		3,898		
Tana Tovea	-		40,372		3,244,426	942,465				
District Morowali	-		970,576	4,955	130,420,166	54,843,762	1,390,325	779,625	63,605	137,061
Bahodopi	-		1,458		13,605,634	1,050,850	34,509		4,156	
Bumi Raya	-		15,635			36,806	76,445		163,290	
Bungku Barat	-		60,914		10,624,759	1,136,940				
Bungku Selatan			33,023		7,087,098	1,276,481	166,702		138,146	
Bungku Tengah	-		12,317		16,422,941	3,725,935	82,937			
Bungku Utara	-		146,597		28,688,602	6,820,311	753,486		37,801	
Lembo	-		56,864		11,039,285	3,191,266				
Mamo Salato	-		130,629		6,298,862	9,626,926	23,077		51,267	
Menui Kepulauan	-		9		1,370,788	68	19,468			
Mori Atas	-		206,408		2,180,569	19,900,412				
Petasia	-		165,726	4,955	7,391,470	4,854,159	17,697		254,446	63,605
Soyo Jaya	-		127,435		17,058,624	2,178,008	214,556			137,061
Wita Ponda			13,561		8,651,535	1,045,599	1,448		130,519	
District Parigi Moutong	-		507,139	1,850	47,490,857	30,317,678	473,181	449,408		
Ampibabo			15,144		1,389,993	1,884,757	4,444		2,607	

District/ Subdistrict	Stock Carbon (Ton C) 2009									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Balinggi	-		8,415		2,986,881	569,127	10,361	22,125		
Bolano Lambunu	-		159,622	1,850	3,021,986	2,127,903	156,098	112,524		
Kasimbar	-		4,099		2,004,436	1,557,515	1,210	3,333		
Mepanga			36,028		302,188	196,167		5,869		
Moutong	-		35,327		5,811,292	3,311,357	42,171	147,935		
Palasa	-		128,347		5,049,078	9,058,326		5,179		
Parigi	-		3,907		8,139	26,069				
Parigi Barat					1,498,458	331,621				
Parigi Selatan			33,224		3,100,411	119,749				
Parigi Tengah					1,240,837	23,089				
Parigi Utara			286		639,332	54,185				
Sausu	-		32,076		30,634	2,546,017	18,492	34,131		
Siniu					830,653	40,136				
Taopa	-		11,172		3,094,253	1,658,438	199,813	41,024		
Tinombo	-		21,058		5,259,167	2,508,349	2,735	6,806		
Tinombo Selatan	-		4,713		3,641,190	2,097,847	32,074	38,478		
Tomini			10,664		2,662,139	1,442,057		2,178		
Toribulu	-				1,743,684	751,527	5,783	27,220		
Torue			3,057		3,176,106	13,442				
District Poso	-		390,599		66,524,854	26,318,133		146,441		

District/ Subdistrict	Stock Carbon (Ton C) 2009									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Lage	-		43,038		1,633,471	1,491,337				
Lore Barat	-		10,324		5,088,897	371,335				
Lore Peore			868		5,004,817	865				
Lore Selatan	-		54,256		9,154,368	1,313,089				
Lore Tengah			3,999		9,659,086	509,044				
Lore Timur	-				911,721					
Lore Utara			7,048		8,581,584	699,259				
Pamona Barat	-				2,467,023	754,574				
Pamona Selatan	-		2,048		598,189	4,092,471				
Pamona Tenggara	-		5,855		7,467	1,220,851				
Pamona Timur	-		39,745		2,011,484	4,089,121				
Pamona Utara	-		62,604		7,782,382	6,385,546				
Poso Kota	-		448		3	123,780				
Poso Kota Selatan	-		10,613		43,674	168,424				
Poso Kota Utara	-		18,313		4,331	32,856			64,006	
Poso Pesisir	-		63,015		4,736,947	231,624			31,260	
Poso Pesisir Selatan	-		23,013		5,582,563	122,575				
Poso Pesisir Utara	-		45,414		3,256,846	4,711,380			51,175	
District Sigi	-		569,591		60,747,056	10,727,195				
Dolo Barat	-		10,655		700,088	70,370				

District/ Subdistrict	Stock Carbon (Ton C) 2009									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Dolo Selatan	-		32,961		2,612,778	175,710				
Gumbasa	-		13,463		1,286,904	13,940				
Kinovaro	-		115,083		1,219,080	1,541,065				
Kulawi	-		158,254		16,696,220	1,539,341				
Kulawi Selatan	-		10,443		6,974,919	311,473				
Lindu	-		9,593		4,179,834	562,212				
Marawola	-		13,860			245,129				
Marawola Barat			27,071		1,057,596	1,460,569				
Nakilalaki			2,696		2,928,806	594,281				
Palolo	-		11,739		1,872,578	75,676				
Pipikoro	-		124,824		14,146,381	2,224,488				
Sigi Biromaru	-		18,314		5,882,433	1,895,426				
Tanambulava	-		20,635		1,189,437	17,516				
District Tojo Una-Una	-		653,468		22,512,942	38,557,435	211,474	667,339		
Ampana Kota			62,491			1,861,759				
Ampana Tete	-		70,916		117,501	10,787,330			3,353	
Togian			19,242			1,649,836	30,538	338,510		
Tojo	-		134,171		13,755,516	1,713,026	822	3,808		
Tojo Barat			23,187		443,435	7,442,762		11,673		
Ulubongka	-		245,818		8,025,334	9,293,534				

District/ Subdistrict	Stock Carbon (Ton C) 2009									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Unauna	-		74,420		159,657	3,870,195	180,113	126,921		
Walea Besar								504		
Walea Kepulauan			23,224		11,499	1,938,993		182,569		
District Toli-Toli	-		292,386	3,098	23,252,879	19,301,731	233,657	67,463		877,023
Baolan	-		57,088		4,452,338	3,385,027	17,476	623		
Basidondo	-		63,142		4,942,989	2,906,369	13,470			
Dakopemean					1,549,702	777,615	10,970	8,571		
Dampal Selatan			8,995		1,095,868	825,113	6,127			
Dampal Utara	-		59,922			2,028,278	2,721			
Dondo	-		26,407		3,147,841	1,629,971	9,001			
Galang			19,456		4,542,159	981,023	14,091			
Lampasio	-		3,344		1,478,985	2,003,642		7,001		592,474
Ogodeide	-		45,630	3,098		2,151,679	139,234	42,371		284,550
Tolitoli Utara	-		8,401		2,042,997	2,613,015	20,566	8,897		
Kota Palu	-	-	72,711		1,202,744	1,717,405				
Palu Barat	-		36,139		76,148	442,842				
Palu Selatan	-	-	508		121,354	363,542				
Palu Timur	-		4,998		949,128	720,740				
Palu Utara	-		31,065		56,113	190,282				
No Data	-		2,170			4,312				

District/ Subdistrict	Stock Carbon (Ton C) 2009									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Total	-	-	5,306,041	14,121	501,754,891	290,569,906	3,302,472	4,087,858	63,605	1,196,164

Sumber: Hasil Pengolahan Data Spasial

Table 7.6 (Continued). Carbon Stock based on Land Use-Land Cover by District/City and Subdistrict 2009

District/ Subdistrict	Stock Carbon (Ton C) 2009										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
District Banggai	2,840	1,971,201		304,081	1,010,221	-		58,779	-	-	21,030
Balantak	283	106,213		4,375	129,369	-					-
Batui	7	323,000		36,501	81,841			7,776	-	-	
Bualemo	188			39,672	53,625	-		4,344			
Bunta	103	348,202		7,520	91,467			5,453			9,001
Kintom	85	4,825		18,785	86,366						
Lamala	260	128,564		2,412	174,448	-		1,956			
Luwuk	1,222			45,420	101,903						-
Luwuk Timur	16	111,962		6,009	106,526			499			-
Masama	2			6,334	69,959			11,506			
Nuhon	98	213,393		45,828	35,522			1,513			1,448
Pagimana	494	18,235		28,310	27,825			1,019			-

District/ Subdistrict	Stock Carbon (Ton C) 2009										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Toili	82	329,921		29,161	28,763			16,669		-	10,581
Toili Barat		386,887		33,754	22,606			8,045		-	
District Banggai Kepulauan	1,445	60,797		171,261	1,790,750	-				-	
Banggai	154			504	13,843						
Banggai Selatan	33				2,730						
Banggai Tengah				452	2,868						
Banggai Utara	51			155	13,978						
Bangkurung	89			7,157	37,312					-	
Bokan Kepulauan	172			12,265	55,972	-					
Buko	142			2,836	132,131						
Buko Selatan	40			9,175	185,179						
Bulagi	57			17,471	138,843						
Bulagi Selatan	19			60,025	116,055						
Bulagi Utara	116			3,119	194,685						
Labobo	107				19,375						
Liang	27			2,995	85,874						
Peling Tengah	9			585	113,384						
Tinangkung	102			6,445	166,431						
Tinangkung Selatan	11	60,797		3,383	147,177						
Tinangkung Utara	92				152,882						

District/ Subdistrict	Stock Carbon (Ton C) 2009										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Totikum	190			11,099	188,367						
Totikum Selatan	37			33,593	23,666						
District Buol	1,435	1,652,233		182,256	202,592			15,657		-	
Biau	247			6,351	29,683			1,505			
Bokat	309	8,061		888	14,222			4,868			
Bukal	57	720,612		5,908	8,614			238			
Bunobogu	69			23,599	1,458			346		-	
Gadung	65			43,767						-	
Keramat	123			14,458	18,567						
Lipunoto	314	3,399		30,586	7,962			2,391			
Momunu	108	423,243		17,321	48,576			3,093			
Paleleh	76	35,787		13,888	36,872			1,281			
Paleleh Barat	68	29,151		25,363	14,045			191			
Tiloan		431,980		128	22,591			1,743			
District Donggala	3,556	533,101	-	341,872	129,275	-		42,956	-	-	1,516
Balaseang	843			3,784	1,457			4,006			
Banawa	306			19,612	7,384						
Banawa Selatan	136	103,131		739	18,391	-		3,707			
Banawa Tengah	98	13,148		8,416	2,192						
Dampelas Sojol	570	43,147		116,770	24,212			13,024			1,516
Labuan	202			14,197	11			1,138			

District/ Subdistrict	Stock Carbon (Ton C) 2009										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Pinembani											
Rio Pakava		218,227		73,494	12,700			30			
Sindue	188			16,250				1,193			
Sindue Tobata	185			1,084	910						
Sindue Tombusabora	51			5,037							
Sirenja	391			7,462	1,800			5,853			
Sojol	412	155,449		47,876	53,653			10,662	-		
Sojol Utara	138			15,783	2,443			3,343	-		
Tana Tovea	35		-	11,369	4,123						
District Morowali	3,148	2,004,868	-	556,766	795,692	127,010	63,682		-		292
Bahodopi	13			14,043	29,351			1,835			
Bumi Raya	544	239,570		362	47,038			1,452			
Bungku Barat	178	101,244		5,715	116,220			3,154			
Bungku Selatan	169			7,273	33,953						
Bungku Tengah	397			33,069	144,594			6,000			292
Bungku Utara	190	628,971		92,918	55,667			1,487			
Lembo		254,174		114,056	65,331			8,802			
Mamo Salato				75,609	72,245			2,395			
Menui Kepulauan	2				1,381						
Mori Atas	1,015		-	124,259	88,091	117,899	10,407				
Petasia	373	370,630		44,695	104,326	6,189	8,085				

District/ Subdistrict	Stock Carbon (Ton C) 2009										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Soyo Jaya	247			25,436	26,430		2,922	20,065			
Wita Ponda	21	410,278		19,331	11,065						
District Parigi Moutong	4,022	924,160		237,745	605,477	-		151,104	-	-	20,224
Ampibabo	395				43,717						
Balinggi					61,106			42,096	-		12
Bolano Lambunu	442	208,241		43,915	90,159	-		40,070	-	-	13,931
Kasimbar	241			14,159	13,615			5,146			
Mepanga	102	68,810		104	171			1,315			
Moutong	711	349,908		13,131	55,200			1,386	-	-	
Palasa	340	29,156		3,771	21,119			948			
Parigi	224			38,753	17,946			12,760			
Parigi Barat				2,851	8,795			242			
Parigi Selatan	59			9,821	18,748			17,266			
Parigi Tengah	84			8,157	7,147						
Parigi Utara	60			15,965	3,874						
Sausu	0			1,023	20,546			2,582	-		2,227
Siniu	107			579	19,670						
Taopa	86	195,374		38,126	11,163			2,459	-	-	4,054
Tinombo	630			11,721	92,958			2,359			
Tinombo Selatan	71			22,523	3,341			7,681	-		
Tomini	162	72,671		2,792	39,740			1,438			

District/ Subdistrict	Stock Carbon (Ton C) 2009										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Toribulu	199			5,418	47,088			3,539	-		
Torue	109			4,938	29,377			9,817			
District Poso	2,390	130,550	-	540,572	343,229			32,516	-	-	5,845
Lage	61	2,372		29,023	29,196			931			
Lore Barat				7,763	4,954			1,466			
Lore Peore	21			45,270	4,092			83			
Lore Selatan				2,034	26			4,059			
Lore Tengah			-	17,943	13,775			5,669			
Lore Timur				50,583	7,332			3,280			
Lore Utara				36,826	21,531			1,692			
Pamona Barat	135			5,153	49,529			5,619			
Pamona Selatan	64			89,107	18,914						
Pamona Tenggara				47,720	13			57			
Pamona Timur	418			22,718	28,069			3,462			
Pamona Utara	993			70,649	45,128			1,516			4,713
Poso Kota	332			18,039	17,190						
Poso Kota Selatan	80	11,440		1,701	23,662						
Poso Kota Utara	209	33,088		2,379	11,248						
Poso Pesisir	41	9,643		38,945	23,882			2,535			
Poso Pesisir Selatan	36	74,007		34,206	22,317			1,094			1,132
Poso Pesisir Utara				20,512	22,371			1,052	-		

District/ Subdistrict	Stock Carbon (Ton C) 2009									
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land
District Sigi	666			168,968	341,993		11,996	82,224		-
Dolo Barat	23			35,923	10,407			5,882		
Dolo Selatan				7,341	20,674			1,501		
Gumbasa				2,119	5,337					
Kinovaro				710	3,764			779		
Kulawi				31,867	38,846			3,657		
Kulawi Selatan	24			22	27,227			3,328		-
Lindu				11,985	9,821			4,240		
Marawola	155			36,699	52,751		3,592	20,407		-
Marawola Barat										
Nakilalaki	131			2,844	27,021			6,539		
Palolo	50				36,102			9,606		
Pipikoro	19			17,638	45,251			6,070		
Sigi Biromaru	263			14,737	50,258		7,020	14,048		
Tanambulava	0			7,084	14,535		1,384	6,168		
District Tojo Una-Una	2,329	119,223		474,983	279,212			3,161		-
Ampana Kota	157	75,228		60,209	35,440			240		
Ampana Tete	416			61,621	42,814					-
Togian	11			7,121	39,289					
Tojo	1,243	43,995		51,368	48,545			1,803		-
Tojo Barat	64			85,583	10,404			1,087		

District/ Subdistrict	Stock Carbon (Ton C) 2009										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Ulubongka	284			194,781	90,004			30		-	
Unauna	154			10,896	5,541					-	
Walea Besar											
Walea Kepulauan				3,404	7,175						
District Toli-Toli	3,484	571,166		320,079	227,328	-		66,356	-	-	1,015
Baolan	792	84,574		10,876	10,732			8,366	-		
Basidondo	136	31,140		38,136	37,097			537	-		
Dakopemean	155			17,887	14,886			1,986			
Dampal Selatan	328	262,368		27,981	2,705			10,406	-		
Dampal Utara	558	6,358		6,838	1,763	-		1,505	-		
Dondo	457			38,288	33,823			8,974	-		
Galang	535	150,995		44,824	4,676			23,677	-		
Lampasio	51	14,118		53,128	7,855			4,331			1,015
Ogodeide	80	2,103		47,830	46,018	-		3,129	-	-	
Tolitoli Utara	392	19,511		34,291	67,773			3,445	-		
Kota Palu	3,865		-	42,854	5,968			2,476	-	-	
Palu Barat	1,149			2,547				2,023			
Palu Selatan	1,874		-	9,885	4			453			
Palu Timur	546		-	980	3,726				-		
Palu Utara	296		-	29,442	2,238				-		
No Data	108			1,902	454			26		-	

District/ Subdistrict	Stock Carbon (Ton C) 2009										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Total	29,287	7,967,299	-	3,343,338	5,732,193	-	139,007	518,936	-	-	49,922

Source: Result of data analysis

Table 7.7 Carbon Stock based on Landuse-Land cover by District/City and Subdistrict 2006

District/ Subdistrict	Stock Carbon (Ton C) 2006									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
District Banggai	-	-	1,203,163	3,894	59,904,711	55,362,619	152,630	1,147,575		82,585
Balantak	-		90,170		4,588,554	1,937,852	43	20,500		
Batui	-		262,358		2,354,612	5,710,843		187,577		
Bualemo	-		228,777	3,894	6,377,853	3,365,564	87	265,329		
Bunta			22,521		6,849,818	3,294,786		24,043		
Kintom	-		85,159		4,806,583	3,368,526		24,616		
Lamala			11,968		1,111,787	1,132,083		19,593		59,873
Luwuk		-	108,620		3,838,643	1,290,475				
Luwuk Timur			11,389		568,508	465,846		120,923		
Masama			370		1,355,028	671,694		72,247		22,712
Nuhon	-		118,565		5,602,170	14,213,801	62,350	6,571		
Pagimana	-		89,205		18,011,608	6,406,982	90,149	53,635		
Toili	-		56,271		1,360,186	6,560,503		111,684		

District/ Subdistrict	Stock Carbon (Ton C) 2006									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Toili Barat	-		117,792		3,079,359	6,943,665			240,857	
District Banggai Kepulauan	-	110,032			6,010,081	10,026,950	616,485	782,027		
Banggai	-					1,361,216				
Banggai Selatan						1,423,016			6,209	
Banggai Tengah					760	848,329			1,545	
Banggai Utara	-					449,297	18,040		17,371	
Bangkurung	-				13,345	1,140,424	230,447		39,259	
Bokan Kepulauan	-		16,654		500	1,628,393	317,103		382,268	
Buko			9,341		436,382	763,350			14,575	
Buko Selatan			2,310			67,340			90,170	
Bulagi	-		948		2,533,614	105,121			143	
Bulagi Selatan					789,327	252,300				
Bulagi Utara	-		9,973		2,099,382	771,461			85,413	
Labobo	-				197	789,806	50,895		36,922	
Liang			65,281		1,772	43,540			3,957	
Peling Tengah			5,207			20,554			9,415	
Tinangkung					134,804	317,919			8,830	
Tinangkung Selatan			299			3,782			68,756	
Tinangkung Utara	-					1,007			14,747	
Totikum	-									

District/ Subdistrict	Stock Carbon (Ton C) 2006									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Totikum Selatan	-		18						40,096	2,447
District Buol	-		219,183		40,110,343	14,706,984	137,178	4,961		99,494
Biau			17,190		2,159,000	1,783,652				
Bokat	-		26,994		1,366,949	1,167,310	7,281		2,026	
Bukal			50,038		3,898,797	2,304,741				
Bunobogu	-		9,690		3,941,229	712,699	100,114			
Gadung	-		2,670		2,771,859	97,818	9,621			
Keramat			23,722		769	1,304,803	12,710			
Lipunoto	-		19,523		233,829	1,285,618				99,494
Momunu	-		30,985		147,259	653,560				
Paleleh	-		14,288		713,485	1,501,431	7,451		2,935	
Paleleh Barat	-		6,725		1,541,072	81,034				
Tiloan	-		17,358		23,336,096	3,814,319				
District Donggala	-		309,584		44,053,812	29,096,321	87,544	45,603		
Balaseang	-		5,460		3,708,281	4,216,520	21,335	18,618		
Banawa			33,349		34,289	763,385		2,275		
Banawa Selatan	-		10,436		1,182,144	6,078,005		12,213		
Banawa Tengah	-		26		102,154	709,005				
Dampelas Sojol	-		34,153		4,040,110	2,056,519	9,931	5,131		
Labuan	-		24,057		1,461,926	231,448				

District/ Subdistrict	Stock Carbon (Ton C) 2006									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Pinembani			18,773		5,329,488	3,405,732				
Rio Pakava	-		20,288		8,838,768	4,198,552				
Sindue	-		31,474		127,492	651,505				
Sindue Tobata	-		7,770		3,915,932	772,625				
Sindue Tombusabora	-		19,785		1,169,557	492,304				
Sirenja	-		13,036		3,719,576	1,119,722				
Sojol	-		36,266		6,521,633	2,149,745	52,380	7,365		
Sojol Utara	-		14,339		658,034	1,308,789	3,898			
Tana Tovea	-		40,372		3,244,426	942,465				
District Morowali	-		931,837	4,955	131,481,124	56,068,505	1,390,325	779,625	63,605	137,061
Bahodopi	-		1,768		13,632,566	1,027,460	34,509	4,156		
Bumi Raya	-		15,635			36,806	76,445	163,290		
Bungku Barat	-		56,814		10,927,171	1,032,277				
Bungku Selatan			27,997		7,128,072	1,335,218	166,702	138,146		
Bungku Tengah	-		11,254		16,660,786	3,653,386	82,937			
Bungku Utara	-		137,147		28,688,602	6,927,217	753,486	37,801		
Lembo	-		56,829		11,067,131	3,442,321				
Mamo Salato	-		120,544		6,298,862	9,741,017	23,077	51,267		
Menui Kepulauan	-		9		1,370,788	68	19,468			
Mori Atas	-		205,430		2,372,213	19,745,036				

District/ Subdistrict	Stock Carbon (Ton C) 2006									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Petasia	-		167,104	4,955	7,397,949	5,857,182	17,697	254,446	63,605	137,061
Soyo Jaya	-		117,744		17,058,624	2,421,911	214,556			
Wita Ponda			13,561		8,878,361	848,606	1,448	130,519		
District Parigi Moutong	-		507,139	1,850	49,553,731	28,574,664	473,181	449,408		
Ampibabo			15,144		1,389,993	1,884,757	4,444	2,607		
Balinggi	-		8,415		2,986,881	569,127	10,361	22,125		
Bolano Lambunu	-		159,622	1,850	4,485,223	896,597	156,098	112,524		
Kasimbar	-		4,099		2,004,436	1,557,515	1,210	3,333		
Mepanga			36,028		302,188	196,167		5,869		
Moutong	-		35,327		5,811,292	3,311,357	42,171	147,935		
Palasa	-		128,347		5,049,078	9,058,326		5,179		
Parigi	-		3,907		12,715	22,095				
Parigi Barat					1,590,311	251,850				
Parigi Selatan			33,224		3,100,411	119,749				
Parigi Tengah					1,241,177	22,793				
Parigi Utara			286		639,332	54,185				
Sausu	-		32,076		30,634	2,546,017	18,492	34,131		
Siniu					830,653	40,136				
Taopa	-		11,172		3,586,687	1,230,771	199,813	41,024		
Tinombo	-		21,058		5,269,600	2,508,349	2,735	6,806		

District/ Subdistrict	Stock Carbon (Ton C) 2006									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Tinombo Selatan	-		4,713		3,641,190	2,097,847	32,074	38,478		
Tomini			10,664		2,662,139	1,442,057		2,178		
Toribulu	-				1,743,684	751,527	5,783	27,220		
Torue			3,057		3,176,106	13,442				
District Poso	-		390,599		66,527,787	26,701,170			146,441	
Lage	-		43,038		1,633,471	1,491,337				
Lore Barat	-		10,324		5,088,897	371,335				
Lore Peore			868		5,004,817	865				
Lore Selatan	-		54,256		9,154,368	1,313,089				
Lore Tengah			3,999		9,659,086	509,044				
Lore Timur	-				911,721					
Lore Utara			7,048		8,581,584	699,259				
Pamona Barat	-				2,467,023	754,574				
Pamona Selatan	-		2,048		598,189	4,299,760				
Pamona Tenggara	-		5,855		7,467	1,220,851				
Pamona Timur	-		39,745		2,014,416	4,086,574				
Pamona Utara	-		62,604		7,782,382	6,385,546				
Poso Kota	-		448		3	123,780				
Poso Kota Selatan	-		10,613		43,674	168,424				
Poso Kota Utara	-		18,313		4,331	32,856		64,006		

District/ Subdistrict	Stock Carbon (Ton C) 2006									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Poso Pesisir	-		63,015		4,736,947	231,624		31,260		
Poso Pesisir Selatan	-		23,013		5,582,563	122,575				
Poso Pesisir Utara	-		45,414		3,256,846	4,889,674		51,175		
District Sigi	-		565,249		61,235,898	10,364,813				
Dolo Barat	-		10,655		700,088	70,370				
Dolo Selatan	-		32,961		2,683,324	114,442				
Gumbasa	-		13,463		1,302,955					
Kinovaro	-		110,700		1,219,080	1,590,654				
Kulawi	-		158,296		17,203,462	1,111,391				
Kulawi Selatan	-		10,443		6,904,505	372,626				
Lindu	-		9,593		4,179,834	562,212				
Marawola	-		13,860			245,129				
Marawola Barat			27,071		1,057,596	1,460,569				
Nakilalaki			2,696		2,928,806	594,281				
Palolo	-		11,739		1,872,578	75,676				
Pipikoro	-		124,824		14,111,798	2,254,522				
Sigi Biromaru	-		18,314		5,882,433	1,895,426				
Tanambulava	-		20,635		1,189,437	17,516				
District Tojo Una-Una	-		648,947		22,544,002	38,835,261	211,474	667,339		
Ampana Kota			62,491			1,865,365				

District/ Subdistrict	Stock Carbon (Ton C) 2006									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Ampana Tete	-		70,916		117,501	10,787,330			3,353	
Togian			19,242			1,649,836	30,538	338,510		
Tojo	-		131,295		13,786,577	1,777,083	822	3,808		
Tojo Barat			23,187		443,435	7,442,762			11,673	
Ulubongka	-		244,173		8,025,334	9,503,698				
Unauna	-		74,420		159,657	3,870,195	180,113	126,921		
Walea Besar									504	
Walea Kepulauan			23,224		11,499	1,938,993			182,569	
District Toli-Toli	-		292,041	3,098	23,507,373	19,090,885	233,657	67,463		877,023
Baolan	-		57,088		4,452,338	3,385,027	17,476	623		
Basidondo	-		62,797		5,197,484	2,689,249	13,470			
Dakopemean					1,549,702	777,615	10,970	8,571		
Dampal Selatan			8,995		1,095,868	825,113	6,127			
Dampal Utara	-		59,922			2,028,278	2,721			
Dondo	-		26,407		3,147,841	1,629,971	9,001			
Galang			19,456		4,542,159	981,023	14,091			
Lampasio	-		3,344		1,478,985	2,004,571		7,001		592,474
Ogodeide	-		45,630	3,098		2,157,024	139,234	42,371		284,550
Tolitoli Utara	-		8,401		2,042,997	2,613,015	20,566	8,897		
Kota Palu	-	-	70,109		1,202,744	1,746,844				

District/ Subdistrict	Stock Carbon (Ton C) 2006									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Palu Barat	-		33,537		76,148	472,280				
Palu Selatan	-	-	508		121,354	363,542				
Palu Timur	-		4,998		949,128	720,740				
Palu Utara	-		31,065		56,113	190,282				
No Data	-		2,170			4,312				
Total	-	-	5,250,054	13,797	506,131,606	290,579,328	3,302,472	4,090,443	63,605	1,196,164

Sumber: Hasil Pengolahan Data Spasial

Table 7.8 (Continued). Carbon Stock Based on Land Use-Land Cover by District/City and Subdistrict 2006

District/ Subdistrict	Stock Carbon (Ton C) 2006										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
District Banggai	2,840	1,971,201		304,081	981,523	-		58,779	-	-	21,030
Balantak	283	106,213		4,375	120,646	-					
Batui	7	323,000		36,501	81,841			7,776	-	-	
Bualemo	188			39,672	48,416	-		4,344			
Bunta	103	348,202		7,520	79,979			5,453			9,001
Kintom	85	4,825		18,785	86,366						
Lamala	260	128,564		2,412	174,448	-		1,956			
Luwuk	1,222			45,420	101,600						

District/ Subdistrict	Stock Carbon (Ton C) 2006										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Luwuk Timur	16	111,962		6,009	103,598			499		-	
Masama	2			6,334	69,959			11,506			
Nuhon	98	213,393		45,828	35,522			1,513		-	1,448
Pagimana	494	18,235		28,310	27,779			1,019		-	
Toili	82	329,921		29,161	28,763			16,669		-	10,581
Toili Barat		386,887		33,754	22,606			8,045		-	
District Banggai Kepulauan	1,445	60,797		171,261	1,790,750					-	
Banggai	154			504	13,843						
Banggai Selatan	33				2,730						
Banggai Tengah				452	2,868						
Banggai Utara	51			155	13,978						
Bangkurung	89			7,157	37,312					-	
Bokan Kepulauan	172			12,265	55,972			-			
Buko	142			2,836	132,131						
Buko Selatan	40			9,175	185,179						
Bulagi	57			17,471	138,843						
Bulagi Selatan	19			60,025	116,055						
Bulagi Utara	116			3,119	194,685						
Labobo	107				19,375						
Liang	27			2,995	85,874						
Peling Tengah	9			585	113,384						

District/ Subdistrict	Stock Carbon (Ton C) 2006										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Tinangkung	102			6,445	166,431						
Tinangkung Selatan	11	60,797		3,383	147,177						
Tinangkung Utara	92				152,882						
Totikum	190			11,099	188,367						
Totikum Selatan	37			33,593	23,666						
District Buol	1,435	1,652,233		182,256	202,592			15,657		-	
Biau	247			6,351	29,683				1,505		
Bokat	309	8,061		888	14,222				4,868		
Bukal	57	720,612		5,908	8,614				238		
Bunobogu	69			23,599	1,458				346		-
Gadung	65			43,767						-	
Keramat	123			14,458	18,567						
Lipunoto	314	3,399		30,586	7,962				2,391		
Momunu	108	423,243		17,321	48,576				3,093		
Paleleh	76	35,787		13,888	36,872				1,281		
Paleleh Barat	68	29,151		25,363	14,045				191		
Tiloan		431,980		128	22,591				1,743		
District Donggala	3,556	533,101	-	339,693	126,926	-		39,297	-	-	1,516
Balaseang	843			3,784	1,457				2,562		
Banawa	306			19,612	7,384						
Banawa Selatan	136	103,131		739	18,391	-		3,707	-		

District/ Subdistrict	Stock Carbon (Ton C) 2006										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Banawa Tengah	98	13,148		8,416	2,192						
Dampelas Sojol	570	43,147		115,845	23,953			12,678	-		1,516
Labuan	202			14,197	11			1,138			
Pinembani											
Rio Pakava		218,227		73,494	12,700			30			
Sindue	188			16,250				1,193			
Sindue Tobata	185			1,084	910						
Sindue Tombusabora	51			5,037							
Sirenja	391			6,727	1,800			5,853			
Sojol	412	155,449		48,574	51,561			8,378	-		
Sojol Utara	138			14,566	2,443			3,759	-		
Tana Tovea	35		-	11,369	4,123						
District Morowali	3,148	1,667,842	-	555,034	781,655		127,010	63,682	-		292
Bahodopi	13			14,043	29,351			1,835			
Bumi Raya	544	239,570		362	47,038			1,452			
Bungku Barat	178	101,244		5,715	111,512			3,154			
Bungku Selatan	169			7,273	31,231						
Bungku Tengah	397			33,069	137,405			6,000			292
Bungku Utara	190	628,971		92,918	55,667			1,487			
Lembo		161,119		112,916	65,331			8,802			
Mamo Salato				75,609	72,245			2,395			

District/ Subdistrict	Stock Carbon (Ton C) 2006										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Menui Kepulauan	2				1,381						
Mori Atas	1,015		-	124,259	88,091		117,899	10,407			-
Petasia	373	126,659		44,103	112,819		6,189	8,085			
Soyo Jaya	247			25,436	18,518		2,922	20,065			
Wita Ponda	21	410,278		19,331	11,065						
District Parigi Moutong	4,022	924,160		237,745	603,528	-		151,104	-	-	20,224
Ampibabo	395				43,717						
Balinggi					61,106			42,096	-		12
Bolano Lambunu	442	208,241		43,915	87,833	-		40,070	-	-	13,931
Kasimbar	241			14,159	13,615			5,146			
Mepanga	102	68,810		104	171			1,315			
Moutong	711	349,908		13,131	55,577			1,386	-	-	
Palasa	340	29,156		3,771	21,119			948			
Parigi	224			38,753	17,946			12,760			
Parigi Barat				2,851	8,795			242			
Parigi Selatan	59			9,821	18,748			17,266			
Parigi Tengah	84			8,157	7,147						
Parigi Utara	60			15,965	3,874						
Sausu	0			1,023	20,546			2,582	-		2,227
Siniu	107			579	19,670						
Taopa	86	195,374		38,126	11,163			2,459	-	-	4,054

District/ Subdistrict	Stock Carbon (Ton C) 2006										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Tinombo	630			11,721	92,958			2,359		-	
Tinombo Selatan	71			22,523	3,341			7,681		-	
Tomini	162	72,671		2,792	39,740			1,438			
Toribulu	199			5,418	47,088			3,539		-	
Torue	109			4,938	29,377			9,817			
District Poso	2,390	130,550	-	540,572	320,508			32,516	-	-	5,845
Lage	61	2,372		29,023	29,196			931		-	
Lore Barat				7,763	4,954			1,466		-	
Lore Peore	21			45,270	4,092			83		-	
Lore Selatan				2,034	26			4,059		-	
Lore Tengah			-	17,943	13,775			5,669		-	
Lore Timur				50,583	7,332			3,280		-	
Lore Utara				36,826	21,531			1,692			
Pamona Barat	135			5,153	49,529			5,619		-	
Pamona Selatan	64			89,107	6,699						
Pamona Tenggara				47,720	13			57			
Pamona Timur	418			22,718	28,069			3,462		-	
Pamona Utara	993			70,649	45,128			1,516		-	4,713

District/ Subdistrict	Stock Carbon (Ton C) 2006										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Poso Kota	332			18,039	17,190						
Poso Kota Selatan	80	11,440		1,701	23,662						
Poso Kota Utara	209	33,088		2,379	11,248						
Poso Pesisir	41	9,643		38,945	23,882			2,535		-	
Poso Pesisir Selatan	36	74,007		34,206	22,317			1,094		-	1,132
Poso Pesisir Utara				20,512	11,864			1,052	-		
District Sigi	666			168,353	341,993		11,996	82,224			-
Dolo Barat	23			35,923	10,407			5,882			
Dolo Selatan				7,341	20,674			1,501			
Gumbasa				2,119	5,337						
Kinovaro				710	3,764			779			
Kulawi				31,252	38,846			3,657			
Kulawi Selatan	24			22	27,227			3,328		-	
Lindu				11,985	9,821			4,240			
Marawola	155			36,699	52,751		3,592	20,407		-	
Marawola Barat											
Nakilalaki	131			2,844	27,021			6,539			
Palolo	50				36,102			9,606			
Pipikoro	19			17,638	45,251			6,070			
Sigi Biromaru	263			14,737	50,258		7,020	14,048			

District/ Subdistrict	Stock Carbon (Ton C) 2006										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Tanambulava	0			7,084	14,535		1,384	6,168			
District Tojo Una-Una	2,329	119,223		471,362	268,791			3,161		-	
Ampana Kota	157	75,228		60,209	35,228			240			
Ampana Tete	416			61,621	42,814					-	
Togian	11			7,121	39,289						
Tojo	1,243	43,995		51,368	45,098			1,803		-	
Tojo Barat	64			85,583	10,404			1,087			
Ulubongka	284			191,160	83,243			30		-	
Unauna	154			10,896	5,541					-	
Walea Besar				3,404	7,175						
Walea Kepulauan											
District Toli-Toli	3,484	571,166		319,827	227,274	-		66,356	-	-	
Baolan	792	84,574		10,876	10,732			8,366		-	
Basidondo	136	31,140		38,136	37,097			537		-	
Dakopemean	155			17,887	14,886			1,986			
Dampal Selatan	328	262,368		27,981	2,705			10,406		-	
Dampal Utara	558	6,358		6,838	1,763	-		1,505		-	
Dondo	457			38,288	33,823			8,974		-	
Galang	535	150,995		44,824	4,676			23,677		-	
Lampasio	51	14,118		53,128	7,801			4,331		1,015	
Ogodeide	80	2,103		47,578	46,018	-		3,129	-	-	

District/ Subdistrict	Stock Carbon (Ton C) 2006										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Tolitoli Utara	392	19,511		34,291	67,773			3,445	-	-	
Kota Palu	3,845		-	42,854	6,166			2,476	-	-	
Palu Barat	1,149			2,547				2,023			
Palu Selatan	1,874		-	9,885	4			453			
Palu Timur	527		-	980	3,924				-		
Palu Utara	296		-	29,442	2,238				-		
No Data	108			1,902	454			26		-	
Grand Total	29,267	7,630,273	-	3,334,939	5,652,159	-	139,007	515,277	-	-	49,922

Sumber: Hasil Pengolahan Data Spasial

Table 7.9 Carbon Stock Based on Land Use-Land Cover by District/City and Subdistrict 2003

District /Subdistrict	Stock Carbon (Ton C) 2003									
	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
District Banggai	-	-	1,191,134	3,894	64,842,703	52,059,431	182,598	1,126,421		82,585
Balantak	-		90,170		4,793,745	1,808,195	43	20,500		
Batui	-		262,358		2,354,612	5,710,843		187,577		
Bualemo	-		229,035	3,894	6,471,785	3,283,986	87	265,329		
Bunta			22,521		6,886,824	3,310,264		24,043		
Kintom	-		85,159		7,351,814	1,158,057		24,616		

District /Subdistrict	Water Body	Airport	Stock Carbon (Ton C) 2003							
			Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Lamala			11,968		1,146,017	1,134,690		19,593		59,873
Luwuk		-	108,620		3,838,643	1,311,356				
Luwuk Timur			11,389		551,291	554,004		120,923		
Masama			370		1,519,092	529,208	27,808	52,617		22,712
Nuhon		-	106,996		5,765,963	14,202,439	62,350	6,571		
Pagimana		-	88,486		18,202,431	6,454,809	92,310	52,110		
Toili		-	56,271		1,375,338	6,574,399		111,684		
Toili Barat		-	117,792		4,585,146	6,027,182		240,857		
District Banggai Kepulauan			107,791		6,010,081	10,146,520	742,909	692,786		
Banggai		-				1,361,216				
Banggai Selatan						1,423,016		6,209		
Banggai Tengah					760	848,329		1,545		
Banggai Utara		-				449,297	18,040	17,371		
Bangkurung		-			13,345	1,140,424	230,447	39,259		
Bokan Kepulauan		-	16,654		500	1,628,393	378,582	338,871		
Buko			9,341		436,382	763,350	20,648			
Buko Selatan			69			67,340		90,170		
Bulagi		-	948		2,533,614	105,121		143		
Bulagi Selatan					789,327	252,300				
Bulagi Utara		-	9,973		2,099,382	891,031	35,173	60,585		

District /Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Stock Carbon (Ton C) 2003					
					Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Labobo	-				197	789,806	50,895	36,922		
Liang			65,281		1,772	43,540			3,957	
Peling Tengah			5,207			20,554			9,415	
Tinangkung					134,804	317,919	9,124		2,389	
Tinangkung Selatan			299			3,782			68,756	
Tinangkung Utara	-					1,007			14,747	
Totikum	-									
Totikum Selatan	-		18			40,096			2,447	
District Buol	-		133,208		46,486,105	10,152,665	137,178	4,961		99,494
Biau			17,190		2,316,850	1,646,563				
Bokat	-		25,732		1,404,183	1,149,254		7,281		2,026
Bukal			31,220		6,055,602	644,509				
Bunobogu	-		8,176		4,172,925	528,605	100,114			
Gadung	-		2,670		2,797,958	75,152	9,621			
Keramat			14,211		417,416	1,050,559	12,710			
Lipunoto	-		8,241		1,068,957	687,964				99,494
Momunu	-		2,556		676,551	515,509				
Paleleh	-		10,927		713,485	1,549,677		7,451		2,935
Paleleh Barat	-		6,725		1,541,072	81,034				
Tiloan	-		5,562		25,321,107	2,223,841				

District /Subdistrict	Water Body	Airport	Stock Carbon (Ton C) 2003							
			Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
District Donggala	-		218,940		53,272,772	22,171,277	96,953	38,961		
Balaseang	-		5,460		3,740,352	4,188,667	21,335	18,618		
Banawa			33,349		34,289	763,385		2,275		
Banawa Selatan	-		10,436		1,846,693	5,500,862	9,409	5,572		
Banawa Tengah	-		26		102,154	709,005				
Dampelas Sojol	-		33,377		4,289,769	1,848,466	9,931	5,131		
Labuan	-		2,379		1,461,926	476,703				
Pinembani			18,773		7,968,909	1,113,462				
Rio Pakava	-		18,576		13,285,000	356,477				
Sindue	-		2,744		127,492	976,539				
Sindue Tobata	-		0		3,915,932	860,524				
Sindue Tombusabora	-		978		1,169,557	705,073				
Sirenja	-		13,036		3,719,576	1,119,722				
Sojol	-		31,837		7,103,684	1,750,256	52,380	7,365		
Sojol Utara	-		13,229		914,589	1,098,533	3,898			
Tana Tovea	-		34,739		3,592,849	703,603				
District Morowali	-		765,500	4,955	137,579,525	53,032,196	1,390,325	779,625	63,605	137,061
Bahodopi	-		1,422		13,637,932	1,028,178	34,509	4,156		
Bumi Raya	-		15,635			36,806	76,445	163,290		
Bungku Barat	-		53,328		11,196,194	926,206				

Stock Carbon (Ton C) 2003										
District /Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Bungku Selatan			27,997		7,588,795	899,273	166,702	138,146		
Bungku Tengah	-		10,074		16,808,818	3,613,321	82,937			
Bungku Utara	-		136,538		29,291,762	6,419,744	753,486	37,801		
Lembo	-		56,829		11,356,207	3,295,141				
Mamo Salato	-		92,393		7,531,475	8,989,002	23,077	51,267		
Menui Kepulauan	-		9		1,370,788	68	19,468			
Mori Atas	-		122,889		2,491,814	20,576,776				
Petasia	-		178,866	4,955	9,818,350	3,755,125	17,697	254,446	63,605	137,061
Soyo Jaya	-		63,474		17,559,871	2,603,753	214,556			
Wita Ponda			6,045		8,927,518	888,803	1,448	130,519		
District Parigi Moutong	-		490,153	1,850	51,033,647	27,408,925	517,888	417,850		
Ampibabo			8,723		1,389,993	1,884,757	4,444	2,607		
Balinggi	-		3,691		2,986,881	622,577	38,312	2,395		
Bolano Lambunu	-		159,622	1,850	4,530,682	857,117	156,098	112,524		
Kasimbar	-		4,099		2,004,436	1,557,515	1,210	3,333		
Mepanga			34,398		302,188	214,615		5,869		
Moutong	-		35,327		5,811,292	3,311,357	42,171	147,935		
Palasa	-		128,347		5,049,078	9,058,326		5,179		
Parigi	-		3,907		35,833	2,017				
Parigi Barat					1,855,255	21,752				

District /Subdistrict	Water Body	Airport	Stock Carbon (Ton C) 2003							
			Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Parigi Selatan			33,224		3,122,590	100,487				
Parigi Tengah					1,241,177	22,793				
Parigi Utara			286		639,332	54,185				
Sausu	-		32,076		30,634	2,546,017	35,248		22,303	
Siniu					830,653	40,136				
Taopa	-		11,172		3,586,687	1,230,771	199,813		41,024	
Tinombo	-		16,847		5,952,257	1,963,111	2,735		6,806	
Tinombo Selatan	-		4,713		3,656,888	2,084,213	32,074		38,478	
Tomini			10,664		3,088,000	1,072,207			2,178	
Toribulu	-				1,743,684	751,527	5,783		27,220	
Torue			3,057		3,176,106	13,442				
District Poso	-	326,227		68,362,857	25,974,592		38,345	119,374		
Lage	-		33,608		1,633,471	1,491,337				
Lore Barat	-		10,324		5,088,897	373,307				
Lore Peore			868		5,004,817	865				
Lore Selatan	-		54,256		9,154,368	1,313,089				
Lore Tengah			3,999		9,659,086	509,044				
Lore Timur	-				911,721					
Lore Utara			7,048		8,581,584	699,259				
Pamona Barat	-				3,214,626	105,300				

Stock Carbon (Ton C) 2003										
District /Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Pamona Selatan	-		2,048		1,349,227	3,647,503				
Pamona Tenggara	-		5,855		77,671	1,159,881				
Pamona Timur	-		33,817		2,014,416	4,176,585				
Pamona Utara	-		53,626		7,795,100	6,476,079				
Poso Kota	-		448		3	123,780				
Poso Kota Selatan	-		10,613		43,674	168,424				
Poso Kota Utara	-		18,313		4,331	32,856		64,006		
Poso Pesisir	-		48,419		4,758,581	377,964		31,260		
Poso Pesisir Selatan	-		22,199		5,608,826	483,850				
Poso Pesisir Utara	-		20,787		3,462,456	4,835,467	38,345	24,108		
District Sigi	-		489,493		63,037,739	9,647,052				
Dolo Barat	-		10,655		700,088	70,370				
Dolo Selatan	-		32,961		2,683,324	114,442				
Gumbasa	-		13,463		1,302,955					
Kinovaro	-		95,295		1,219,080	1,764,942				
Kulawi	-		119,786		17,323,925	1,431,202				
Kulawi Selatan	-		10,443		6,974,919	312,750				
Lindu	-		9,593		4,179,834	562,212				
Marawola	-		13,859			245,133				
Marawola Barat	-		19,666		1,210,634	1,411,441				

Stock Carbon (Ton C) 2003										
District /Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Nakilalaki			2,696		2,928,806	594,281				
Palolo	-		11,739		1,872,578	75,676				
Pipikoro	-		121,164		14,146,381	2,265,898				
Sigi Biromaru	-		7,539		7,305,776	781,189				
Tanambulava	-		20,635		1,189,437	17,516				
District Tojo Una-Una	-		315,787		24,453,239	41,369,903	226,941	656,421		
Ampana Kota			6,603		365,994	2,179,781				
Ampana Tete	-		70,872		364,973	10,572,910		3,353		
Togian			19,242			1,649,836	30,538	338,510		
Tojo	-		13,488		14,701,313	2,386,270	822	3,808		
Tojo Barat			3,569		443,435	7,718,807	15,467	755		
Ulubongka	-		155,122		8,406,368	10,478,931				
Unauna	-		23,668		159,657	4,444,375	180,113	126,921		
Walea Besar								504		
Walea Kepulauan			23,224		11,499	1,938,993		182,569		
District Toli-Toli	-		173,234	3,098	25,813,927	18,964,006	233,657	67,463		888,721
Baolan	-		26,400		5,378,890	2,927,522	17,476	623		
Basidondo	-		32,613		5,265,396	3,034,296	13,470			
Dakopemean					1,677,891	827,316	10,970	8,571		
Dampal Selatan			8,995		1,095,868	825,113	6,127			

District /Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Primary Dryland Forest	Stock Carbon (Ton C) 2003				
						Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Dampal Utara	-		25,637			2,416,159	2,721			
Dondo	-		19,922		3,147,841	1,703,346	9,001			
Galang			19,456		5,671,522	199	14,091			
Lampasio	-		960		1,482,161	2,170,301		7,001		592,474
Ogodeide	-		30,849	3,098		2,329,524	139,234	42,371		296,247
Tolitoli Utara	-		8,401		2,094,359	2,730,230	20,566	8,897		
Kota Palu	-	-	62,870		2,132,128	1,021,590				
Palu Barat	-		33,537		76,148	472,280				
Palu Selatan	-	-	508		417,238	106,575				
Palu Timur	-		3,022		1,582,628	192,919				
Palu Utara	-		25,803		56,113	249,816				
No Data	-		2,170		1,090	3,365				
Total	-	-	4,276,507	13,797	543,025,813	271,951,523	3,566,795	3,903,862	63,605	1,207,861

Table 7.10 (Continued). Carbon Stock Based on Land Use-Land Cover by District/City and Subdistrict 2003

District/ Subdistrict	Stock Carbon (Ton C) 2003										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
District Banggai	2,840	1,971,201		286,093	953,965	-		57,967	-	-	21,030
Balantak	283	106,213		4,375	117,785	-				-	-
Batui	7	323,000		36,501	81,841			6,964	-	-	
Bualemo	188			39,672	48,243	-		4,344			
Bunta	103	348,202		7,520	77,173			5,453			9,001
Kintom	85	4,825		18,785	86,366						
Lamala	260	128,564		2,412	172,543	-		1,956		-	
Luwuk	1,222			45,420	100,369					-	
Luwuk Timur	16	111,962		6,009	99,284			499		-	
Masama	2			6,334	69,959			11,506			
Nuhon	98	213,393		45,828	35,522			1,513		-	1,448
Pagimana	494	18,235		27,553	16,619			1,019		-	
Toili	82	329,921		29,161	27,169			16,669		-	10,581
Toili Barat		386,887		16,522	21,090			8,045		-	
District Banggai Kepulauan	1,445	60,797		172,456	1,783,704					-	
Banggai	154			504	13,843						
Banggai Selatan	33				2,730						
Banggai Tengah				452	2,868						
Banggai Utara	51			155	13,978						

District/ Subdistrict	Stock Carbon (Ton C) 2003										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Bangkurung	89			7,157	37,312					-	
Bokan Kepulauan	172			12,265	55,972						
Buko	142			2,836	132,131						
Buko Selatan	40			10,370	185,179						
Bulagi	57			17,471	138,843						
Bulagi Selatan	19			60,025	116,055						
Bulagi Utara	116			3,119	187,639						
Labobo	107				19,375						
Liang	27			2,995	85,874						
Peling Tengah	9			585	113,384						
Tinangkung	102			6,445	166,431						
Tinangkung Selatan	11	60,797		3,383	147,177						
Tinangkung Utara	92				152,882						
Totikum	190			11,099	188,367						
Totikum Selatan	37			33,593	23,666						
District Buol	1,435	1,652,233		181,775	202,592			15,657		-	
Biau	247			6,351	29,683			1,505			
Bokat	309	8,061		888	14,222			4,868			
Bukal	57	720,612		5,908	8,614			238			
Bunobogu	69			23,599	1,458			346		-	
Gadung	65			43,767						-	

District/ Subdistrict	Stock Carbon (Ton C) 2003										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Keramat	123			14,458	18,567						
Lipunoto	314	3,399		30,586	7,962				2,391		
Momunu	108	423,243		17,321	48,576				3,093		
Paleleh	76	35,787		13,407	36,872				1,281		
Paleleh Barat	68	29,151		25,363	14,045				191		
Tiloan		431,980		128	22,591				1,743		
District Donggala	3,556	533,101	-	339,693	123,631	-		39,297	-	-	1,516
Balaseang	843			3,784	1,457				2,562		
Banawa	306			19,612	7,384						
Banawa Selatan	136	103,131		739	18,391	-			3,707	-	
Banawa Tengah	98	13,148		8,416	2,192						
Dampelas Sojol	570	43,147		115,845	23,953				12,678	-	1,516
Labuan	202			14,197	11				1,138		-
Pinembani											
Rio Pakava		218,227		73,494	12,700				30		
Sindue	188			16,250					1,193		
Sindue Tobata	185			1,084	910						
Sindue Tombusabora	51			5,037							
Sirenja	391			6,727	1,800				5,853		
Sojol	412	155,449		48,574	48,267				8,378	-	
Sojol Utara	138			14,566	2,443				3,759	-	

District/ Subdistrict	Stock Carbon (Ton C) 2003										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Tana Tovea	35		-	11,369	4,123						
District Morowali	3,148	1,618,441	-	554,914	768,349		127,010	63,682	-	-	292
Bahodopi	13			13,923	29,351			1,835			
Bumi Raya	544	239,570		362	47,038			1,452			
Bungku Barat	178	101,244		5,715	106,319			3,154			
Bungku Selatan	169			7,273	33,856						
Bungku Tengah	397			33,069	132,977			6,000			292
Bungku Utara	190	628,971		92,918	55,667			1,487			
Lembo		161,119		112,916	59,210			8,802			
Mamo Salato				75,609	72,245			2,395			
Menui Kepulauan	2				1,381						
Mori Atas	1,015		-	124,259	88,091		117,899	10,407	-	-	
Petasia	373	77,258		44,103	112,819		6,189	8,085			
Soyo Jaya	247			25,436	18,330		2,922	20,065			
Wita Ponda	21	410,278		19,331	11,065						
District Parigi Moutong	4,022	924,160		237,745	607,099	-		151,459	-	-	20,224
Ampibabo	395				47,997						
Balinggi					61,106			42,096	-	-	12
Bolano Lambunu	442	208,241		43,915	87,833	-		40,070	-	-	13,931
Kasimbar	241			14,159	13,615			5,146			
Mepanga	102	68,810		104	171			1,315			

District/ Subdistrict	Stock Carbon (Ton C) 2003										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Moutong	711	349,908		13,131	55,577			1,386	-	-	
Palasa	340	29,156		3,771	21,119			948		-	
Parigi	224			38,753	17,946			12,760			
Parigi Barat				2,851	8,795			242			
Parigi Selatan	59			9,821	18,748			17,266			
Parigi Tengah	84			8,157	7,147						
Parigi Utara	60			15,965	3,874						
Sausu	0			1,023	20,546			2,582	-		2,227
Siniu	107			579	19,670						
Taopa	86	195,374		38,126	11,163			2,459	-	-	4,054
Tinombo	630			11,721	92,248			2,714		-	
Tinombo Selatan	71			22,523	3,341			7,681	-		
Tomini	162	72,671		2,792	39,740			1,438			
Toribulu	199			5,418	47,088			3,539	-		
Torue	109			4,938	29,377			9,817			
District Poso	2,390	130,550	-	522,899	335,006			32,516	-	-	5,845
Lage	61	2,372		29,023	35,483			931		-	
Lore Barat				7,763	4,954			1,466		-	
Lore Peore	21			45,270	4,092			83		-	
Lore Selatan				2,034	26			4,059		-	
Lore Tengah			-	17,943	13,775			5,669		-	

District/ Subdistrict	Stock Carbon (Ton C) 2003										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Lore Timur				50,583	7,332			3,280		-	
Lore Utara				36,826	21,531			1,692			
Pamona Barat	135			5,153	49,529			5,619		-	
Pamona Selatan	64			89,107	6,699						
Pamona Tenggara				47,720	13			57			
Pamona Timur	418			22,718	27,191			3,462		-	
Pamona Utara	993			70,649	45,128			1,516		-	4,713
Poso Kota	332			18,039	17,190						
Poso Kota Selatan	80	11,440		1,701	23,662						
Poso Kota Utara	209	33,088		2,379	11,248						
Poso Pesisir	41	9,643		38,945	23,882			2,535		-	
Poso Pesisir Selatan	36	74,007		16,533	22,317			1,094		-	1,132
Poso Pesisir Utara				20,512	20,954			1,052		-	
District Sigi	666			168,353	341,993		11,996	82,224		-	
Dolo Barat	23			35,923	10,407			5,882			
Dolo Selatan				7,341	20,674			1,501			
Gumbasa				2,119	5,337						
Kinovaro				710	3,764			779			
Kulawi				31,252	38,846			3,657		-	
Kulawi Selatan	24			22	27,227			3,328		-	
Lindu				11,985	9,821			4,240			

District/ Subdistrict	Stock Carbon (Ton C) 2003										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Marawola	155			36,699	52,751		3,592	20,407		-	
Marawola Barat											
Nakilalaki	131			2,844	27,021			6,539			
Palolo	50				36,102			9,606			
Pipikoro	19			17,638	45,251			6,070			
Sigi Biromaru	263			14,737	50,258		7,020	14,048			
Tanambulava	0			7,084	14,535		1,384	6,168			
District Tojo Una-Una	2,329	119,223		465,473	251,190			3,161		-	
Ampana Kota	157	75,228		60,209	35,228			240			
Ampana Tete	416			61,621	42,814					-	
Togian	11			7,121	39,289						
Tojo	1,243	43,995		48,029	45,098			1,803		-	
Tojo Barat	64			83,032	10,404			1,087			
Ulubongka	284			191,160	65,642			30		-	
Unauna	154			10,896	5,541					-	
Walea Besar											
Walea Kepulauan				3,404	7,175						
District Toli-Toli	3,484	571,166		316,411	200,998	-		66,356	-		1,015
Baolan	792	84,574		10,876	10,732			8,366		-	
Basidondo	136	31,140		36,726	35,173			537		-	
Dakopemean	155			17,887	5,397			1,986			

District/ Subdistrict	Stock Carbon (Ton C) 2003										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Dampal Selatan	328	262,368		27,981	2,705			10,406	-	-	
Dampal Utara	558	6,358		6,838	1,763	-		1,505	-	-	
Dondo	457			38,288	33,823			8,974	-	-	
Galang	535	150,995		44,824	4,676			23,677	-	-	
Lampasio	51	14,118		50,718	2,474			4,331			1,015
Ogodeide	80	2,103		47,982	46,018			3,129	-	-	
Tolitoli Utara	392	19,511		34,291	58,237			3,445	-	-	
Kota Palu	3,845		-	42,854	6,166			2,476	-	-	
Palu Barat	1,149			2,547				2,023			
Palu Selatan	1,874		-	9,885	4			453			
Palu Timur	527		-	980	3,924				-		
Palu Utara	296		-	29,442	2,238				-		
<hr/>											
No Data	108			1,902	454			26	-	-	
Total	29,267	7,580,872	-	3,290,567	5,575,148	-	139,007	514,820	-	-	49,922

Source: Result of data analysis!

Table 7.11 Carbon Stock Based on Land Use-Land Cover by District/City and Subdistrict 2000

District/ Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Stock Carbon (Ton C) 2000					
					Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
District Banggai	-	-	1,044,852	3,894	87,978,801	33,841,282	213,199	1,104,821		82,585
Balantak	-		65,137		5,748,305	1,265,155		43	20,500	
Batui	-		259,831		2,354,612	5,766,989			187,577	
Bualemo	-		113,674	3,894	6,683,502	4,405,231		30,688	243,729	
Bunta			22,521		7,084,452	3,138,629			24,043	
Kintom	-		85,159		7,351,814	1,158,057			24,616	
Lamala			11,968		1,448,980	952,428			19,593	59,873
Luwuk		-	108,435		3,838,643	1,313,440				
Luwuk Timur			11,389		738,413	412,859			120,923	
Masama			370		1,559,296	494,292		27,808	52,617	22,712
Nuhon	-		106,232		17,123,603	4,423,825		62,350	6,571	
Pagimana	-		88,780		18,409,205	6,281,256		92,310	52,110	
Toili	-		53,563		4,916,085	3,531,548			111,684	
Toili Barat	-		117,792		10,721,891	697,573			240,857	
District Banggai Kepulauan	-		107,791		6,010,081	10,146,520	742,909	692,786		
Banggai	-					1,361,216				
Banggai Selatan						1,423,016			6,209	
Banggai Tengah					760	848,329			1,545	
Banggai Utara	-					449,297		18,040	17,371	
Bangkurung	-				13,345	1,140,424		230,447	39,259	

District/ Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Stock Carbon (Ton C) 2000					
					Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Bokan Kepulauan	-		16,654		500	1,628,393	378,582	338,871		
Buko			9,341		436,382	763,350	20,648			
Buko Selatan			69			67,340		90,170		
Bulagi	-		948		2,533,614	105,121			143	
Bulagi Selatan					789,327	252,300				
Bulagi Utara	-		9,973		2,099,382	891,031	35,173	60,585		
Labobo	-				197	789,806	50,895	36,922		
Liang			65,281		1,772	43,540		3,957		
Peling Tengah			5,207			20,554		9,415		
Tinangkung					134,804	317,919	9,124	2,389		
Tinangkung Selatan			299			3,782		68,756		
Tinangkung Utara	-					1,007		14,747		
Totikum	-									
Totikum Selatan	-		18			40,096		2,447		
District Buol	-		107,922		48,474,275	8,820,954	140,048	2,935		99,494
Biau			15,897		2,526,938	1,478,731				
Bokat	-		13,387		1,543,979	1,167,506	10,151			
Bukal			24,783		6,321,272	486,609				
Bunobogu	-		4,589		4,232,591	517,365	100,114			
Gadung	-		2,670		2,797,958	75,152	9,621			
Keramat			14,211		417,416	1,071,275	12,710			
Lipunoto	-		6,834		1,191,447	665,582				99,494

District/ Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Stock Carbon (Ton C) 2000					
					Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Momunu	-		2,556		803,113	428,155				
Paleleh	-		10,708		713,485	1,549,677	7,451	2,935		
Paleleh Barat	-		6,725		1,541,072	81,034				
Tiloan	-		5,562		26,385,006	1,299,871				
District Donggala	-		189,349		55,204,975	20,866,326	96,953	38,961		
Balaseang	-		5,460		3,768,686	4,164,060	21,335	18,618		
Banawa			33,349		34,289	763,385		2,275		
Banawa Selatan	-				2,310,419	5,231,262	9,409	5,572		
Banawa Tengah	-		26		102,154	709,005				
Dampelas Sojol	-		33,238		4,289,769	1,850,047	9,931	5,131		
Labuan	-				1,476,131	491,275				
Pinembani			9,443		7,968,909	1,219,024				
Rio Pakava	-		18,576		13,285,000	356,477				
Sindue	-		2,307		127,492	981,483				
Sindue Tobata	-		0		3,915,932	860,524				
Sindue Tombusabora	-		978		1,169,557	705,073				
Sirenga	-		6,349		3,719,576	1,195,376				
Sojol	-		32,897		8,120,153	878,764	52,380	7,365		
Sojol Utara	-		11,988		978,142	1,057,387	3,898			
Tana Tovea	-		34,739		3,938,763	403,186				
District Morowali	-		713,409	4,955	148,964,554	44,180,773	1,390,335	779,625	63,605	137,061
Bahodopi	-		1,112		13,639,166	1,031,686	34,509	4,156		

District/ Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Stock Carbon (Ton C) 2000					
					Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Bumi Raya	-		15,635			68,196	76,445	163,290		
Bungku Barat	-		50,370		11,234,305	1,007,089				
Bungku Selatan			27,996		7,670,920	822,060	166,712	138,146		
Bungku Tengah	-		8,678		16,810,561	3,797,259	82,937			
Bungku Utara	-		136,367		32,167,154	3,924,474	753,486	37,801		
Lembo	-		56,829		11,635,399	3,052,670				
Mamo Salato	-		92,393		14,128,495	3,303,358	23,077	51,267		
Menui Kepulauan	-				1,370,906	68	19,468			
Mori Atas	-		121,550		2,548,606	20,666,468				
Petasia	-		166,216	4,955	10,247,050	3,525,932	17,697	254,446	63,605	137,061
Soyo Jaya	-		31,104		18,345,825	2,287,379	214,556			
Wita Ponda			5,159		9,166,164	694,134	1,448	130,519		
District Parigi Moutong	-		433,437	1,850	58,031,983	22,091,408	517,888	417,850		
Ampibabo			8,723		1,389,993	1,884,757	4,444	2,607		
Balinggi	-		3,691		2,992,754	617,477	38,312	2,395		
Bolano Lambunu	-		132,999	1,850	4,530,682	1,179,046	156,098	112,524		
Kasimbar	-		4,099		2,004,436	1,557,515	1,210	3,333		
Mepanga			34,398		302,188	214,615		5,869		
Moutong	-		5,234		8,085,894	1,676,377	42,171	147,935		
Palasa	-		128,347		8,976,099	5,647,807		5,179		
Parigi	-		3,907		35,833	2,017				
Parigi Barat					1,855,255	21,752				

District/ Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Stock Carbon (Ton C) 2000					
					Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Parigi Selatan			33,224		3,122,590	100,487				
Parigi Tengah					1,241,177	22,793				
Parigi Utara			286		683,571	15,765				
Sausu	-		32,076		30,634	2,546,017	35,248	22,303		
Siniu					841,455	30,755				
Taopa	-		11,172		4,142,361	748,182	199,813	41,024		
Tinombo	-		16,847		6,018,793	2,003,305	2,735	6,806		
Tinombo Selatan	-		4,713		3,656,888	2,084,213	32,074	38,478		
Tomini			10,664		3,201,589	973,558		2,178		
Toribulu	-				1,743,684	751,527	5,783	27,220		
Torue			3,057		3,176,106	13,442				
District Poso	-		223,049		69,396,928	26,374,426	38,345	119,374		
Lage	-				1,633,471	1,978,244				
Lore Barat	-		10,324		5,091,168	371,335				
Lore Peore			868		5,004,817	865				
Lore Selatan	-		51,850		9,154,368	1,340,307				
Lore Tengah			3,999		9,659,086	509,044				
Lore Timur	-				911,721					
Lore Utara			7,048		8,778,905	527,891				
Pamona Barat	-				3,214,626	105,300				
Pamona Selatan	-		2,048		1,349,227	3,647,503				
Pamona Tenggara	-		5,855		77,671	1,159,881				

District/ Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Stock Carbon (Ton C) 2000					
					Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Pamona Timur	-		31,813		2,014,416	4,202,757				
Pamona Utara	-		21,867		7,795,100	6,842,531				
Poso Kota	-				3	128,844				
Poso Kota Selatan	-		1,128		43,674	275,728				
Poso Kota Utara	-		4,336		4,331	190,982		64,006		
Poso Pesisir	-		48,419		4,758,581	377,964		31,260		
Poso Pesisir Selatan	-		12,708		5,608,826	604,508				
Poso Pesisir Utara	-		20,787		4,296,936	4,110,743	38,345	24,108		
District Sigi	-		470,331		63,992,977	9,045,481				
Dolo Barat	-		10,655		700,088	70,370				
Dolo Selatan	-		32,961		2,683,324	114,442				
Gumbasa	-		13,463		1,302,955					
Kinovaro	-		88,780		1,297,626	1,770,426				
Kulawi	-		118,519		17,416,484	1,376,398				
Kulawi Selatan	-		10,443		7,119,013	187,608				
Lindu	-		9,593		4,179,834	562,212				
Marawola	-		13,859			245,133				
Marawola Barat			8,286		1,210,634	1,540,190				
Nakilalaki			2,696		3,223,967	337,942				
Palolo	-		11,739		1,872,578	75,676				
Pipikoro	-		121,164		14,472,792	1,982,418				
Sigi Biromaru	-		7,539		7,324,244	765,150				

District/ Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Stock Carbon (Ton C) 2000					
					Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Tanambulava	-		20,635		1,189,437	17,516				
District Tojo Una-Una	-		265,861		39,619,720	28,834,719	226,941	656,421		
Ampana Kota			6,603		1,012,089	1,621,113				
Ampana Tete	-		60,226		10,944,594	1,566,044			3,353	
Togian			19,242			1,649,836	30,538	338,510		
Tojo	-		13,488		14,870,756	2,239,112	822	3,808		
Tojo Barat			952		443,435	7,748,409	15,467	755		
Ulubongka	-		118,459		12,177,690	7,626,836				
Unauna	-		23,668		159,657	4,444,375	180,113	126,921		
Walea Besar								504		
Walea Kepulauan			23,224		11,499	1,938,993		182,569		
District Toli-Toli	-		141,148	3,098	25,842,856	20,238,138	233,657	67,463	888,721	
Baolan	-		23,956		5,378,890	3,042,250	17,476	623		
Basidondo	-		20,556		5,265,396	3,615,411	13,470			
Dakopemean					1,677,891	827,316	10,970	8,571		
Dampal Selatan			8,995		1,095,868	825,113	6,127			
Dampal Utara	-		25,637			2,416,159	2,721			
Dondo	-		10,997		3,147,841	2,147,951	9,001			
Galang			19,456		5,671,522	199	14,091			
Lampasio	-		93		1,490,310	2,173,042		7,001		592,474
Ogodeide	-		23,058	3,098		2,478,515	139,234	42,371		296,247
Tolitoli Utara	-		8,401		2,115,138	2,712,183	20,566	8,897		

District/ Subdistrict	Water Body	Airport	Shrub	Swamp Shrub	Stock Carbon (Ton C) 2000					
					Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Kota Palu	-	-	62,870		2,222,634	942,987				
Palu Barat	-		33,537		76,148	472,280				
Palu Selatan	-	-	508		433,073	92,822				
Palu Timur	-		3,022		1,582,628	192,919				
Palu Utara	-		25,803		130,785	184,965				
No Data	-		1,643		1,090	9,333				
Total	-	-	3,761,663	13,797	605,740,873	225,392,349	3,600,276	3,880,236	63,605	1,207,861

Source: result of data analysis

Tabel 7.12 (Continued). Carbon Stock Based on Land Use-Land Cover by District/City and Subdistrict 2000

District/ Subdistrict	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Stock Carbon (Ton C) 2000					
						Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
District Banggai	2,840	1,971,201		284,406	944,731	-		57,967	-	-	21,030
Balantak	283	106,213		4,375	117,622	-					
Batui	7	323,000		36,501	81,841			6,964	-	-	
Bualemo	188			39,672	48,243	-		4,344			
Bunta	103	348,202		7,520	77,173			5,453			9,001
Kintom	85	4,825		18,785	86,366						
Lamala	260	128,564		2,412	167,778	-		1,956			

District/ Subdistrict	Stock Carbon (Ton C) 2000										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Luwuk	1,222			45,420	100,369					-	
Luwuk Timur	16	111,962		6,009	98,025			499		-	
Masama	2			6,334	69,959			11,506			
Nuhon	98	213,393		44,396	32,800			1,513		-	1,448
Pagimana	494	18,235		27,372	16,294			1,019		-	
Toili	82	329,921		29,088	27,169			16,669		-	10,581
Toili Barat		386,887		16,522	21,090			8,045		-	
District Banggai Kepulauan	1,445	60,797		172,456	1,783,704			-		-	
Banggai	154			504	13,843						
Banggai Selatan	33				2,730						
Banggai Tengah				452	2,868						
Banggai Utara	51			155	13,978						
Bangkurung	89			7,157	37,312						
Bokan Kepulauan	172			12,265	55,972			-			
Buko	142			2,836	132,131						
Buko Selatan	40			10,370	185,179						
Bulagi	57			17,471	138,843						
Bulagi Selatan	19			60,025	116,055						
Bulagi Utara	116			3,119	187,639						
Labobo	107				19,375						
Liang	27			2,995	85,874						

District/ Subdistrict	Stock Carbon (Ton C) 2000										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Peling Tengah	9			585	113,384						
Tinangkung	102			6,445	166,431						
Tinangkung Selatan	11	60,797		3,383	147,177						
Tinangkung Utara	92				152,882						
Totikum	190			11,099	188,367						
Totikum Selatan	37			33,593	23,666						
District Buol	1,435	1,652,233		181,891	196,030			15,657	-		
Biau	247			6,351	29,683			1,505			
Bokat	309	8,061		888	14,222			4,868			
Bukal	57	720,612		5,908	8,614			238			
Bunobogu	69			23,599	1,458			346	-		
Gadung	65			43,767					-		
Keramat	123			14,458	17,346						
Lipunoto	314	3,399		30,586	3,950			2,391			
Momunu	108	423,243		17,321	47,246			3,093			
Paleleh	76	35,787		13,523	36,872			1,281			
Paleleh Barat	68	29,151		25,363	14,045			191			
Tiloan		431,980		128	22,591			1,743			
District Donggala	3,556	533,101	-	338,982	121,724	-		39,297	-	-	1,516
Balaseang	843			3,784	1,457			2,562			
Banawa	306			19,612	7,384						

District/ Subdistrict	Stock Carbon (Ton C) 2000										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Banawa Selatan	136	103,131		28	18,391	-		3,707	-		
Banawa Tengah	98	13,148		8,416	2,192						
Dampelas Sojol	570	43,147		115,845	23,953			12,678	-		1,516
Labuan	202			14,197	11			1,138	-		
Pinembani											
Rio Pakava		218,227		73,494	12,700			30			
Sindue	188			16,250				1,193			
Sindue Tobata	185			1,084	910						
Sindue Tombusabora	51			5,037							
Sirenja	391			6,727	1,800			5,853			
Sojol	412	155,449		48,574	46,359			8,378	-		
Sojol Utara	138			14,566	2,443			3,759	-		
Tana Tovea	35		-	11,369	4,123						
District Morowali	3,148	1,617,444		547,220	759,211		127,010	63,682		-	292
Bahodopi	13			13,923	29,351			1,835	-		
Bumi Raya	544	239,570		362	45,188			1,452			
Bungku Barat	178	101,244		5,715	101,575			3,154			
Bungku Selatan	169			7,273	34,203						
Bungku Tengah	397			25,397	132,659			6,000	-		292
Bungku Utara	190	628,971		92,918	55,667			1,487	-		
Lembo		161,119		112,916	59,210			8,802			

District/ Subdistrict	Stock Carbon (Ton C) 2000										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Mamo Salato				75,587	69,697			2,395			
Menui Kepulauan	2				1,381						
Mori Atas	1,015			124,259	88,091		117,899	10,407			-
Petasia	373	77,258		44,103	112,819		6,189	8,085			
Soyo Jaya	247			25,436	18,330		2,922	20,065			
Wita Ponda	21	409,281		19,331	11,041						-
District Parigi Mountong	4,022	924,160		236,767	603,516	-		150,364	-	-	20,224
Ampibabo	395				47,997						
Balinggi					61,106			42,096	-		12
Bolano Lambunu	442	208,241		42,937	87,833	-		40,070	-	-	13,931
Kasimbar	241			14,159	15,805			4,050			
Mepanga	102	68,810		104	171			1,315			
Moutong	711	349,908		13,131	55,577			1,386	-	-	
Palasa	340	29,156		3,771	21,119			948			
Parigi	224			38,753	17,946			12,760			
Parigi Barat				2,851	8,795			242			
Parigi Selatan	59			9,821	18,748			17,266			
Parigi Tengah	84			8,157	7,147						
Parigi Utara	60			15,965	3,874						
Sausu	0			1,023	20,546			2,582	-		2,227
Siniu	107			579	19,670						

District/ Subdistrict	Stock Carbon (Ton C) 2000										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Taopa	86	195,374		38,126	11,163			2,459	-	-	4,054
Tinombo	630			11,721	86,475			2,714			-
Tinombo Selatan	71			22,523	3,341			7,681	-		
Tomini	162	72,671		2,792	39,740			1,438			
Toribulu	199			5,418	47,088			3,539	-		
Torue	109			4,938	29,377			9,817			
District Poso	2,390	130,550	-	522,899	327,596			32,516	-	-	5,845
Lage	61	2,372		29,023	29,196			931			-
Lore Barat				7,763	4,954			1,466			-
Lore Peore	21			45,270	4,092			83			-
Lore Selatan				2,034	26			4,059			-
Lore Tengah			-	17,943	13,775			5,669			-
Lore Timur				50,583	7,332			3,280			-
Lore Utara				36,826	21,531			1,692			
Pamona Barat	135			5,153	49,529			5,619			-
Pamona Selatan	64			89,107	6,699						
Pamona Tenggara				47,720	13			57			
Pamona Timur	418			22,718	27,191			3,462			-
Pamona Utara	993			70,649	44,788			1,516			4,713
Poso Kota	332			18,039	17,190						
Poso Kota Selatan	80	11,440		1,701	23,662						

District/ Subdistrict	Stock Carbon (Ton C) 2000										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Poso Kota Utara	209	33,088		2,379	11,248						
Poso Pesisir	41	9,643		38,945	23,882			2,535		-	
Poso Pesisir Selatan	36	74,007		16,533	21,535			1,094		-	1,132
Poso Pesisir Utara				20,512	20,954			1,052		-	
District Sigi	666			168,353	341,993		11,996	82,224			-
Dolo Barat	23			35,923	10,407			5,882			
Dolo Selatan				7,341	20,674			1,501			
Gumbasa				2,119	5,337						
Kinovaro				710	3,764			779			
Kulawi				31,252	38,846			3,657			
Kulawi Selatan	24			22	27,227			3,328		-	
Lindu				11,985	9,821			4,240			
Marawola	155			36,699	52,751		3,592	20,407		-	
Marawola Barat											
Nakilalaki	131			2,844	27,021			6,539			
Palolo	50				36,102			9,606			
Pipikoro	19			17,638	45,251			6,070			
Sigi Biromaru	263			14,737	50,258		7,020	14,048			
Tanambulava	0			7,084	14,535		1,384	6,168			
District Tojo Una-Una	2,329	119,223		462,093	251,190			3,161		-	
Ampana Kota	157	75,228		60,093	35,228			240			

District/ Subdistrict	Stock Carbon (Ton C) 2000										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Ampana Tete	416			58,754	42,814					-	
Togian	11			7,121	39,289						
Tojo	1,243	43,995		48,029	45,098			1,803		-	
Tojo Barat	64			83,032	10,404			1,087			
Ulubongka	284			190,763	65,642			30		-	
Unauna	154			10,896	5,541					-	
Walea Besar											
Walea Kepulauan				3,404	7,175						
District Toli-Toli	3,484	571,166		316,411	145,827	-		66,356	-		1,015
Baolan	792	84,574		10,876	5,601			8,366		-	
Basidondo	136	31,140		36,726	8,967			537		-	
Dakopemeen	155			17,887	5,397			1,986			
Dampal Selatan	328	262,368		27,981	2,705			10,406		-	
Dampal Utara	558	6,358		6,838	1,763	-		1,505		-	
Dondo	457			38,288	13,574			8,974		-	
Galang	535	150,995		44,824	4,676			23,677		-	
Lampasio	51	14,118		50,718	2,474			4,331			1,015
Ogodeide	80	2,103		47,982	42,433			3,129		-	
Tolitoli Utara	392	19,511		34,291	58,237			3,445		-	
Kota Palu	3,845		-	42,854	6,166			2,476	-	-	
Palu Barat	1,149			2,547				2,023			

District/ Subdistrict	Stock Carbon (Ton C) 2000										
	Settle- ment	Estate crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Trans migration
Palu Selatan	1,874		-	9,885	4			453			
Palu Timur	527		-	980	3,924				-		
Palu Utara	296		-	29,442	2,238				-		
No Data	108			1,902	454			26			
Total	29,267	7,579,875	-	3,276,235	5,482,141	-	139,007	513,725	-	-	49,922

Source: Result of data analysis

VIII. FOREST DEGRADATION AND DEFORESTATION

VIII FOREST DEGRADATION AND DEFORESTATION

8.1 Forest Degradation

Table 8.1 Forest degradation area in Central Sulawesi 2000–2011

Years	Forest Degradation	
	Total (Ha)	Mean (ha/year)
2000-2003	320,826	106,942
2003-2006	187,242	62,414
2006-2009	23,884	7,961
2009-2011	31,521	10,507

Source: Result of data spasial Analysis

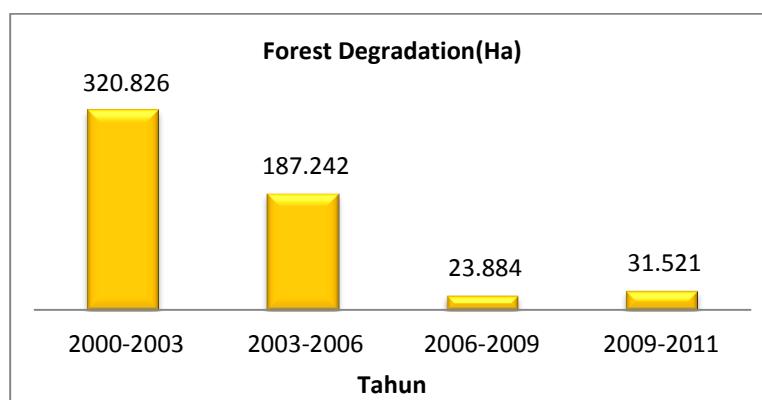


Figure 8.1 Chart of Forest Degradation in Central Sulawesi

Table 8.2 Forest degradation area by District/City and Subdistrict

District/ Subdistrict	Forest Degradation (Ha)				
	1990-2000	2000-2003	2003-2006	2006-2009	2009-2011
District Banggai	34,685	118,442	25,124	1,522	18,528
Balantak	86	4,869	877		18,441
Batui	1,241				
Bualemo	277	1,246	481	938	24
Bunta	1,576	1,011	7	388	
Kintom	577		13,026		
Lamala		1,550	175		63
Luwuk					

District/ Subdistrict	Forest Degradation (Ha)				
	1990-2000	2000-2003	2003-2006	2006-2009	2009-2011
Luwuk Timur	142	853			
Masama		206	1,003	153	
Nuhon	13,855	58,125	788		
Pagimana	9,040	1,055	984		
Toili	7,307	18,121	78		
Toili Barat	584	31,406	7,706	43	
District Banggai Kepulauan	338		744		1,113
Banggai	220				
Banggai Selatan					
Banggai Tengah					
Banggai Utara					
Bangkurung					
Bokan Kepulauan			362		
Buko			121		
Buko Selatan					
Bulagi	118			1,113	
Bulagi Selatan					
Bulagi Utara			207		
Labobo					
Liang					
Peling Tengah					
Tinangkung			54		
Tinangkung Selatan					
Tinangkung Utara					
Totikum					
Totikum Selatan					
District Buol	18,787	10,151	32,383		568
Biau	8,628	1,075	808		
Bokat	1	732	191		
Bukal	1,293	1,360	11,038		433
Bunobogu		265	1,140		
Gadung			134		
Keramat	1,861		2,132		
Lipunoto	36	627	4,074		
Momunu	90	648	2,709		
Paleleh	37				

District/ Subdistrict	Forest Degradation (Ha)				
	1990-2000	2000-2003	2003-2006	2006-2009	2009-2011
Paleleh Barat					
Tiloan	6,841	5,445	10,159		135
District Donggala	7,098	9,775	47,235	199	3,363
Balaseang		145	164		
Banawa					
Banawa Selatan		2,373	3,456		
Banawa Tengah					
Dampelas Sojol	136		1,278		27
Labuan		73			
Pinembani			13,508		
Rio Pakava	865		22,755	199	
Sindue					
Sindue Tobata	0				
Sindue Tombusabora					
Sirenja					
Sojol	205	5,171	2,979		3,173
Sojol Utara	4,699	242	1,313		
Tana Tovea	1,193	1,770	1,783		163
District Morowali	40,268	58,261	31,086	5,447	5,891
Bahodopi	3,208		11	138	873
Bumi Raya	36				
Bungku Barat	844	195	1,377	1,548	1,533
Bungku Selatan	11	420	2,306	210	1,832
Bungku Tengah	16,766		758	1,217	27
Bungku Utara	1,004	14,715	3,031		19
Lembo	486	1,429	1,479		
Mamo Salato	1,439	33,762	6,308		
Menui Kepulauan	0				67
Mori Atas	12,443	291	612	1,140	158
Petasia	903	2,194	12,387	33	1,382
Soyo Jaya	559	4,022	2,565		
Wita Ponda	2,569	1,233	252	1,161	0
District Parigi Mountong	44,581	35,815	7,837	10,504	613
Ampibabo	11,106				
Balinggi	2,388	30	164		
Bolano Lambunu	378		233	7,488	

District/ Subdistrict	Forest Degradation (Ha)				
	1990-2000	2000-2003	2003-2006	2006-2009	2009-2011
Kasimbar					
Mepanga	1,265				
Moutong	7,567	11,641			
Palasa	2,057	20,097			
Parigi	12		118	23	
Parigi Barat	119		1,356	470	
Parigi Selatan	592		114		
Parigi Tengah	134			2	
Parigi Utara	93	226			613
Sausu	3,523		99		
Siniu	56	55			
Taopa	3,600	2,844		2,520	
Tinombo	2,387	341	3,494		
Tinombo Selatan	4,022		80		
Tomini	681	581	2,179		
Toribulu	4,523				
Torue	79				
District Poso	8,345	5,292	9,563	15	793
Lage					
Lore Barat		12			
Lore Peore					
Lore Selatan					
Lore Tengah	877				
Lore Timur					
Lore Utara	445	1,010			
Pamona Barat			3,826		
Pamona Selatan			3,844		
Pamona Tenggara			359		
Pamona Timur	359			15	
Pamona Utara	333		65		32
Poso Kota					
Poso Kota Selatan					
Poso Kota Utara					
Poso Pesisir			111		220
Poso Pesisir Selatan	2,209		80		
Poso Pesisir Utara	4,123	4,271	1,278		542

District/ Subdistrict	Forest Degradation (Ha)				
	1990-2000	2000-2003	2003-2006	2006-2009	2009-2011
District Sigi	4,336	4,889	9,213	3,721	20
Dolo Barat					
Dolo Selatan				361	
Gumbasa				82	
Kinovaro	292	402			
Kulawi	626	474	608	3,277	20
Kulawi Selatan		737	360		
Lindu	249				
Marawola					
Marawola Barat			783		
Nakilalaki	1,768	1,511			
Palolo	430				
Pipikoro	971	1,670	177		
Sigi Biromaru		95	7,284		
Tanambulava					
District Tojo Una-Una	8,270	77,589	7,504	62	601
Ampana Kota	678	3,307	1,873		
Ampana Tete	2,001	54,143	1,266		601
Togian	149				
Tojo	1,900	867	2,323	62	
Tojo Barat			91		
Ulubongka	2,976	19,272	1,950		
Unauna	117				
Walea Besar					
Walea Kepulauan	449				
District Toli-Toli	38,142	148	11,792	1,302	1,143
Baolan	3,612		4,742		566
Basidondo	1,729		346	1,302	
Dakopemean	4,875		656		
Dampal Selatan					
Dampal Utara					
Dondo	109				137
Galang	1		5,780		
Lampasio	11,833	42	5		
Ogodeide					
Tolitoli Utara	15,982	106	263		440

District/ Subdistrict	Forest Degradation (Ha)				
	1990-2000	2000-2003	2003-2006	2006-2009	2009-2011
Kota Palu	39	463	4,756		
Palu Barat					
Palu Selatan		81	1,514		
Palu Timur			3,242		
Palu Utara	39	382			
No Data			6		
Total	204,890	320,826	187,242	23,884	31,521

Source: Result of Spasial data analysis

8.2 Deforestation

Table 8.3 The rate deforestation in Central Sulawesi

Years	Deforestation	
	Total (Ha)	Mean (Ha/year)
2000-2003	46,704	15,568
2003-2006	80,031	26,677
2006-2009	22,487	7,496
2009-2011	34,919	11,640

Source: Result of Spasial data analysis

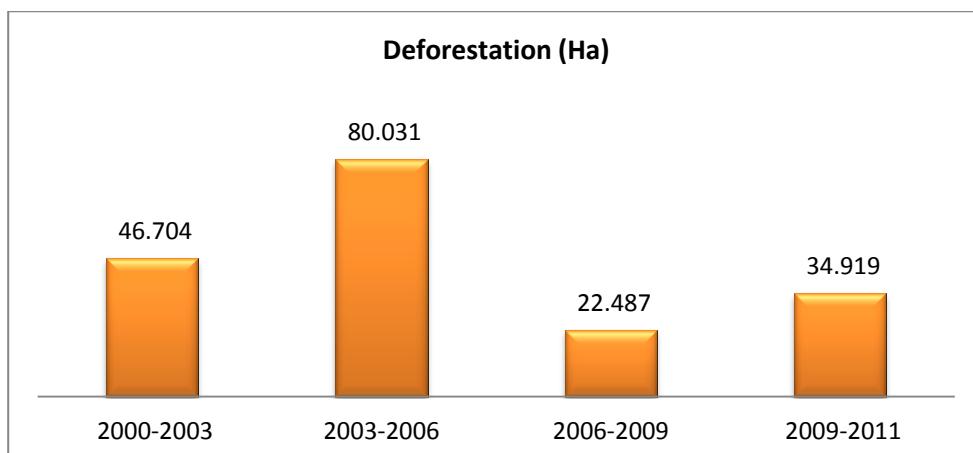


Figure 8.2 Chart of deforestation rate in Central Sulawesi

Table 8.4 Area of deforation by District/City and Subdistrict

District/Subdistrict	Deforestation (Ha)				
	1990-2000	2000-2003	2003-2006	2006-2009	2009-2011
District Banggai	51,922	11,049	5,820	3,484	9,007
Balantak	154	1,685	286	1,111	273
Batui	13,519	331			3,159
Bualemo	9	7,691		731	38
Bunta	7,459		281	1,149	
Kintom	3,217				112
Lamala	0	476	191		
Luwuk	362	12	123	30	373
Luwuk Timur	1,261	126	445	293	
Masama					
Nuhon	8,895	502	771	154	2,408
Pagimana	3,755	36	1,258	15	376
Toili	3,304	190	159		1,792
Toili Barat	9,987		2,306		476
District Banggai Kepulauan	6,381		705		46
Banggai					
Banggai Selatan					
Banggai Tengah					
Banggai Utara	354				
Bangkurung					
Bokan Kepulauan					
Buko					
Buko Selatan					
Bulagi					
Bulagi Selatan					
Bulagi Utara			705		
Labobo					
Liang					
Peling Tengah					
Tinangkung	1,554				46
Tinangkung Selatan	965				
Tinangkung Utara	1,039				
Totikum	1,902				
Totikum Selatan	568				
District Buol	11,864	2,327	5,792		419

District/Subdistrict	Deforestation (Ha)				
	1990-2000	2000-2003	2003-2006	2006-2009	2009-2011
Biau	764	86			
Bokat	758	823	84		
Bukal	3,223	429	1,255		419
Bunobogu	306	239	101		
Gadung	248				
Keramat	77	122	634		
Lipunoto		495	752		
Momunu	790	133	1,895		
Paleleh	2,699		284		
Paleleh Barat	143				
Tiloan	2,857		786		
District Donggala	12,369	2,252	6,372	1,403	4,339
Balaseang	0			405	
Banawa	23			118	
Banawa Selatan		785		20	
Banawa Tengah					
Dampelas Sojol	1,142	9	52	362	221
Labuan		159	1,445		
Pinembani		622		37	
Rio Pakava	8,156		114	69	92
Sindue		29	1,915		
Sindue Tobata			518		
Sindue Tombusabora			1,254		
Sirenja	235	446		92	67
Sojol	2,360	120	625	299	3,287
Sojol Utara	321	83	74		673
Tana Tovea	132		376		
District Morowali	89,867	6,161	14,215	12,647	10,948
Bahodopi	1,482	27	32		242
Bumi Raya	463	185			
Bungku Barat	5,629	672	752	931	18
Bungku Selatan	19	0	93	556	2,294
Bungku Tengah	1,200	1,093	521	790	103
Bungku Utara	8,558	11	96	630	70
Lembo	6,295		612	1,622	362
Mamo Salato	10,281	258	1,877	672	

District/Subdistrict	Deforestation (Ha)				
	1990-2000	2000-2003	2003-2006	2006-2009	2009-2011
Menui Kepulauan		1			43
Mori Atas	31,810	819	5,513	65	6,925
Petasia	18,966	843		5,944	393
Soyo Jaya	4,361	2,158	4,230	1,437	498
Wita Ponda	802	94	488		
District Parigi Mountong	26,770	4,481	704	286	265
Ampibabo	0				
Balinggi			315		224
Bolano Lambunu	13,181	1,897		233	
Kasimbar	812				
Mepanga	2,317		109		
Moutong	706	2,006			
Palasa	522				
Parigi	834				
Parigi Barat	79				
Parigi Selatan	2,278				
Parigi Tengah	715				
Parigi Utara	465				
Sausu	0				41
Siniu					
Taopa	1,447				
Tinombo	1,887	577	281		53
Tinombo Selatan	362				
Tomini	899				
Toribulu	42				
Torque	225				
District Poso	47,811	7,648	5,110	2,272	4,082
Lage	1,558	2,869			203
Lore Barat	538		12		
Lore Peore	379				
Lore Selatan	346	160			
Lore Tengah	8,134				
Lore Timur	1,142				
Lore Utara	2,769				
Pamona Barat	6,551				
Pamona Selatan	1,026		1,222		

District/Subdistrict	Deforestation (Ha)				
	1990-2000	2000-2003	2003-2006	2006-2009	2009-2011
Pamona Tenggara					
Pamona Timur	2,906	154	530		
Pamona Utara	9,374	2,159	599		1,444
Poso Kota	6	30			
Poso Kota Selatan	79	632			
Poso Kota Utara	289	932			
Poso Pesisir	7,960		973		111
Poso Pesisir Selatan	2,471	711	2,263		58
Poso Pesisir Utara	2,283		733	1,051	2,266
District Sidi	30,264	1,344	4,992	366	1,164
Dolo Barat	362				
Dolo Selatan	1,592				
Gumbasa	228				
Kinovaro	20	434	1,027		292
Kulawi	9,500	151	2,501	74	330
Kulawi Selatan	1,301		8		280
Lindu	2,143				
Marawola	12		0		
Marawola Barat		759	494		
Nakilalaki	1,265				
Palolo	783				
Pipikoro	9,425		244		430
Sigi Biromaru	1,699		718		124
Tanambulava	1,934				
District Tojo Una-Una	42,558	3,751	24,707	1,796	2,483
Ampana Kota	1,404	14	3,726	21	40
Ampana Tete	3,882	1,068	3		368
Togian	2,329				176
Tojo	10,559		8,271	536	666
Tojo Barat	11,655	174	1,627		
Ulubongka	10,515	2,494	7,697	1,238	1,078
Unauna	436		3,383		88
Walea Besar					
Walea Kepulauan	1,779				67
District Toli-Toli	18,279	7,656	11,132	60	168
Baolan	2,216	676	2,046		21

District/Subdistrict	Deforestation (Ha)				
	1990-2000	2000-2003	2003-2006	2006-2009	2009-2011
Basidondo	3,228	3,424	2,381	23	
Dakopemean			949		
Dampal Selatan	1,173				66
Dampal Utara	0		2,286		
Dondo	2,453	2,620	432		17
Galang	1,758				
Lampasio	1,504	58	993	5	
Ogodeide	2,987	878	1,092	31	64
Tolitoli Utara	2,959		954		
Kota Palu	728		483	173	1,997
Palu Barat	151			173	
Palu Selatan	348				1,077
Palu Timur	211		132		920
Palu Utara	19		351		
No Data	139	35			
Total	338,952	46,704	80,031	22,487	34,919

Source: Result of Spatial data analysis

IX. CARBON EMISSION & SEQUSTRATION

IX EMISSION AND CARBON SEQUESTRATION

Table 9.1 Emission and carbon sequestration (ton C) in Central Sulawesi

Value	Total (Ton C)			
	2000-2003	2003-2006	2006-2009	2009-2011
Emission	15,560,805	17,410,780	4,003,834	6,387,872
Sequestration	19,339	199,728	100,560	4,144
Net Emission	15,541,466	17,211,052	3,903,275	6,383,729

Sourec: Result of data analysis

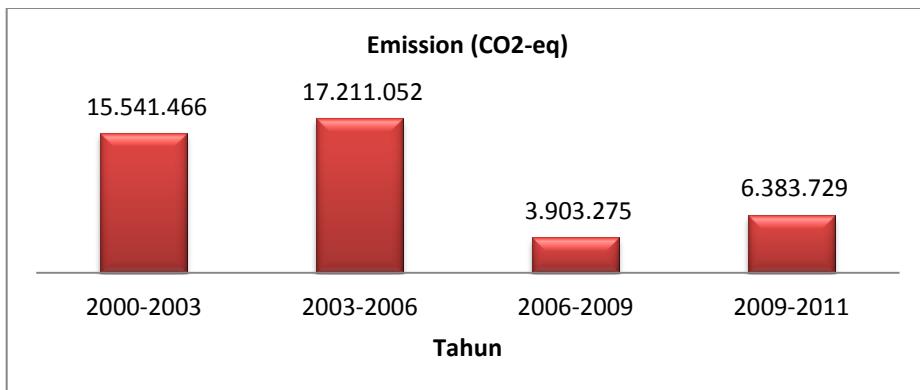


Figure 9.1 Chart of carbon emission in Central Sulawesi

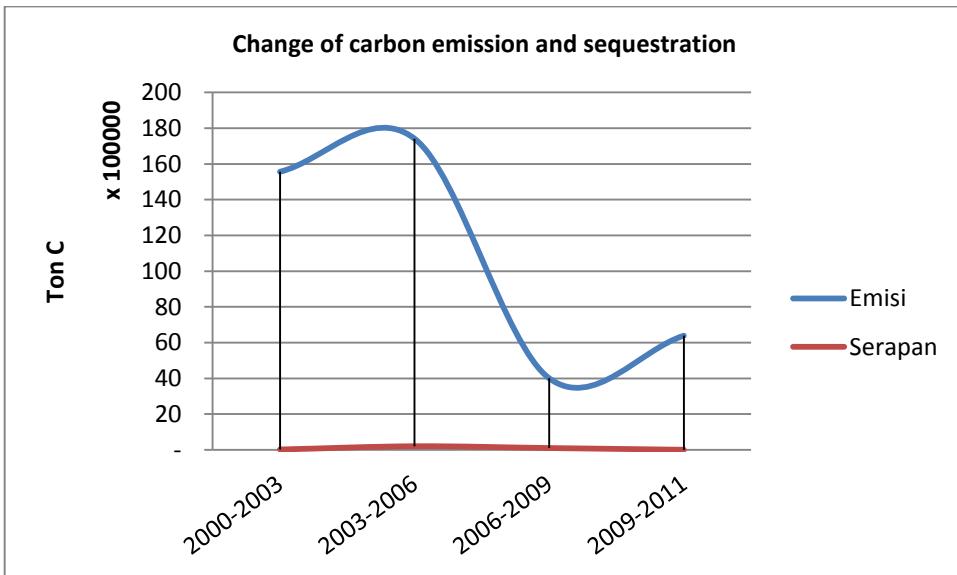


Figure 9.2 Chart of carbon emission and sequestration change in Central Sulawesi

Table 9.2 Carbon emission and sequestration based on landuse-land cover 2009–2011

Land use-Land cover 2009-2011	Carbon Emission and sequestration (Ton CO ₂ -eq) 2009-2011									
	Water body	Aiport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Water body	0									
Aiport		0								
Shrub			0				-2584			
Swamp Shrub				0						
Primary Dryland Forest				85195		0	810098			
Secondary Dryland Forest				1649817			0			
Primary Mangrove Forest								0		
Secondary Mangrove Forest									0	
Primary Swamp Forest										0
Secondary Swamp Forest										0
Setllement										
Estate Crop										
Mining										
Dryland Agriculture	4									
Mixed Dryland Agriculture										
Swamp										
Grassland										
Rice Field										
Embankment										
Vacant Land										

Land use-Land cover 2009-2011	Carbon Emission and sequestration (Ton CO ₂ -eq) 2009-2011									
	Water body	Aiport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Transmigration										
No Data										
Total	4	0	1735012	0	0	807514	0	0	0	0

(-): sequestration; (+): emission

Source: result of data analysis

Table 9.3 (Continued). Carbon emission and sequestration based on landuse-land cover 2009–2011

Land use-Land cover 2009-2011	Carbon Emission and Sequestration (Ton CO ₂ -eq) 2009-2011										
	Setllement	Estate Crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass-land	Rice Field	Embank-ment	Vacant Land	Transmi- gration
Water body											
Aiport											
Shrub				9558		2408					
Swamp Shrub									265		
Primary Dryland Forest			1513		97233					52793	
Secondary Dryland Forest	9148	22931	3350	1441442	2152618			4876		37881	5722
Primary Mangrove Forest											
Secondary Mangrove Forest									1020		
Primary Swamp Forest											
Secondary Swamp Forest											
Setllement		0									
Estate Crop		0									

Land use-Land cover 2009-2011	Carbon Emission and Sequestration (Ton CO ₂ -eq) 2009-2011											
	Settle- ment	Estate Crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Transmi- gration	No Data
Mining			0									
Dryland Agriculture					0							
Mixed Dryland Agriculture						0						
Swamp							0					
Grassland								0				
Rice Field				-65					0			
Embankment										0		
Vacant Land				-1495						0		
Transmigration											0	
No Data												0
Total	9148	22931	4863	1449441	2252259	0	0	5140	1020	90674	5722	0

(-): sequestration; (+): emission

Source: result of data analysis

Tabel 9.4 Carbon emission and sequestration based on landuse-land cover 2006–2009

Land use-Land cover 2006-2009	Carbon Emission and Sequestration (Ton CO ₂ -eq) 2006–2009									
	Water body	Aiport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Water body	0									
Aiport		0								
Shrub			0				-1746			
Swamp Shrub				0						
Primary Dryland Forest					17545	0	613811			
Secondary Dryland Forest						748517		-47300	0	
Primary Mangrove Forest									0	
Secondary Mangrove Forest						2262				0
Primary Swamp Forest										0
Secondary Swamp Forest										0
Settlement										
Estate Crop										
Mining										
Dryland Agriculture										
Mixed Dryland Agriculture										
Swamp										
Grassland										
Rice Field										
Embankment										
Vacant Land				-771						

Land use-Land cover 2006-2009	Carbon Emission and Sequestration (Ton CO ₂ -eq) 2006–2009									
	Water body	Aiport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Transmigration										
No Data										
Total	0	0	765291	2262	-47300	612065	0	0	0	0

(-): sequestration; (+): emission

Source: result of data analysis

Tabel 9.5 (Continued). Carbon emission and sequestration based on landuse-land cover 2006–2009

Land use-Land cover 2006-2009	Carbon Emission and Sequestration (Ton CO ₂ -eq) 2006–2009										
	Settle- ment	Estate Crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Transmi- gration
Water body											
Aiport											
Shrub		-5484		1889	1243					9162	
Swamp Shrub											
Primary Dryland Forest				26706	11562					10433	
Secondary Dryland Forest		551668		123822	1373290			99409		361927	
Primary Mangrove Forest											
Secondary Mangrove Forest											
Primary Swamp Forest											
Secondary Swamp Forest											
Settlement	0										

Land use-Land cover 2006-2009	Carbon Emission and Sequestration (Ton CO ₂ -eq) 2006–2009											
	Settle- ment	Estate Crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Transmi- gration	No Data
Estate Crop		0								49401		
Mining			0									
Dryland Agriculture				0					634			
Mixed Dryland Agriculture	178	-45009			0					378		
Swamp						0						
Grassland							0					
Rice Field				-249				0				
Embankment									0			
Vacant Land										0		
Transmigration										0		
No Data											0	0
Total	178	501174	0	152167	1386094	0	0	100043	0	431300	0	0

(-): sequestration; (+): emission

Source: result of data analysis

Table 9.6 Carbon emission and sequestration based on landuse-land cover 2003–2006

Land use-Land cover 2003-2006	Carbon Emission and Sequestration (Ton CO ₂ -eq) 2003–2006									
	Water body	Aiport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Water body	0									
Aiport		0								
Shrub			0				-91799			
Swamp Shrub				0						
Primary Dryland Forest				421159		0	4772166			
Secondary Dryland Forest				9535609		-3202	0			
Primary Mangrove Forest								0	77742	
Secondary Mangrove Forest									0	
Primary Swamp Forest										0
Secondary Swamp Forest										0
Settlement										
Estate Crop										
Mining										
Dryland Agriculture				-1046						
Mixed Dryland Agriculture				-12582		-2478	-48538			
Swamp										
Grassland										
Rice Field										
Embankment										
Vacant Land				-1279						

Land use-Land cover 2003-2006	Carbon Emission and Sequestration (Ton CO ₂ -eq) 2003–2006									
	Water body	Aiport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Transmigration										
No Data										
Total	0	0	9941862	0	-5679	4631829	0	77742	0	0

(-): sequestration; (+): emission

Source: result of data analysis

Tabel 9.7 (Continued). Carbon emission and sequestration based on landuse-land cover 2003–2006

Penggunaan Lahan Tahun 2003-2006	Emisi dan Serapan Karbon (Ton CO ₂ -eq) Tahun 2003-2006										
	Settle- ment	Estate Crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Transmi- gration
Water body											0
Aiport											
Shrub											
Swamp Shrub											
Primary Dryland Forest											20945
Secondary Dryland Forest											13096
Primary Mangrove Forest											
Secondary Mangrove Forest											
Primary Swamp Forest											
Secondary Swamp Forest											
Settlement	0										

Penggunaan Lahan Tahun 2003-2006	Emisi dan Serapan Karbon (Ton CO ₂ -eq) Tahun 2003-2006											
	Settle- ment	Estate Crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Transmi- gration	No Data
Estate Crop		0										
Mining			0									
Dryland Agriculture				0							653	
Mixed Dryland Agriculture					0							
Swamp						0						
Grassland							0					
Rice Field								-355		0		
Embankment									0			
Vacant Land										-812	0	
Transmigration											0	
No Data												0
Total	0	-37639	0	930316	1627043	11697	0	-812	0	34693	0	0

(-): sequestration; (+): emission

Source: result of data analysis

Tabel 9.8 Carbon emission and sequestration based on landuse-land cover 2000–2003

Land use-Land cover 2000-2003	Carbon Emission and Sequestration (Ton CO ₂ -eq) 2000–2003									
	Water body	Aiport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Water body	0									
Aiport		0								
Shrub			0				-3599			
Swamp Shrub				0						
Primary Dryland Forest				36716		0	8240160			
Secondary Dryland Forest				5340260			0			
Primary Mangrove Forest				9				0	9844	
Secondary Mangrove Forest									0	
Primary Swamp Forest										0
Secondary Swamp Forest										0
Settlement										
Estate Crop										
Mining										
Dryland Agriculture				-102						
Mixed Dryland Agriculture							-5542			
Swamp	0									
Grassland										
Rice Field										
Embankment										
Vacant Land										

Land use-Land cover 2000-2003	Carbon Emission and Sequestration (Ton CO ₂ -eq) 2000–2003									
	Water body	Aiport	Shrub	Swamp Shrub	Primary Dryland Forest	Secondary Dryland Forest	Primary Mangrove Forest	Secondary Mangrove Forest	Primary Swamp Forest	Secondary Swamp Forest
Transmigration										
No Data							-9099			
Total	0	0	5376883	0	-3599	8225520	0	9844	0	0

(-): sequestration; (+): emission

Source: result of data analysis

Tabel 9.9 (Continued). Carbon emission and sequestration based on landuse-land cover 2000–2003

Land Use-Land Cover Tahun 2000-2003	Carbon Emission and Sequestration (Ton CO ₂ -eq) 2000 – 2003										
	Settle- ment	Estate Crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Transmi- gration
Water body											
Aiport											
Shrub			2729		158	954					
Swamp Shrub											
Primary Dryland Forest						22517				4590	
Secondary Dryland Forest			70212		288385	1475968				67207	
Primary Mangrove Forest	1										
Secondary Mangrove Forest											
Primary Swamp Forest											
Secondary Swamp Forest											
Settlement	0										

Land Use-Land Cover Tahun 2000-2003	Carbon Emission and Sequestration (Ton CO ₂ -eq) 2000 – 2003											
	Settle- ment	Estate Crop	Mining	Dryland Agriculture	Mixed Dryland Agriculture	Swamp	Grass- land	Rice Field	Embank- ment	Vacant Land	Transmi- gration	No Data
Estate Crop		0										
Mining			0									
Dryland Agriculture				0								
Mixed Dryland Agriculture					0				1095			
Swamp						0						
Grassland							0					
Rice Field								0				
Embankment									0			
Vacant Land			-997							0		
Transmigration										0		
No Data											0	0
Total	1	-997	72941	288543	1499439	0	0	1095	0	71797	0	0

(-): sequestration; (+): emission

Source: result of data analysis