

3.3.1 DENR組織図

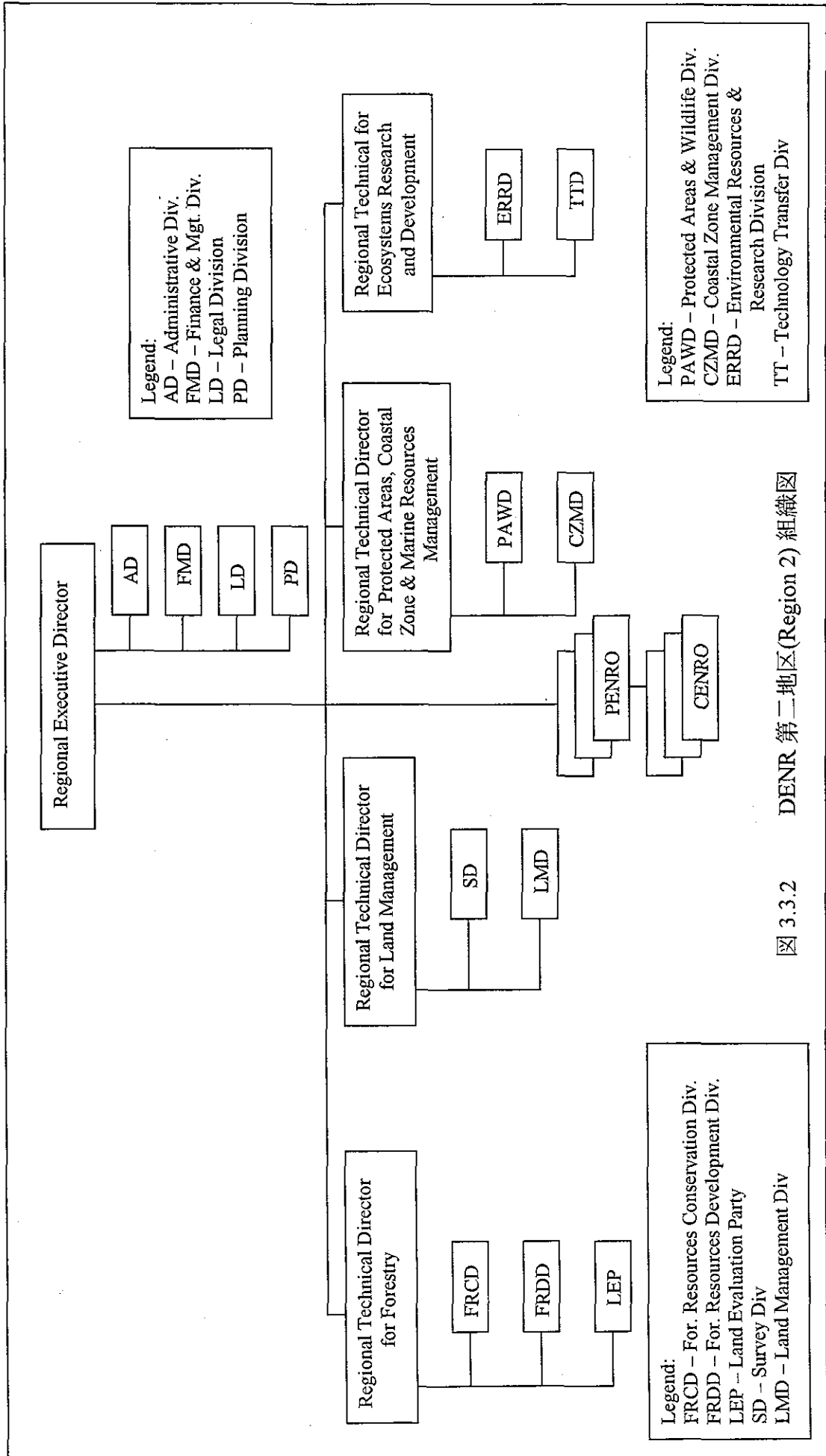


図 3.3.2 DENR 第二地区(Region 2) 組織図

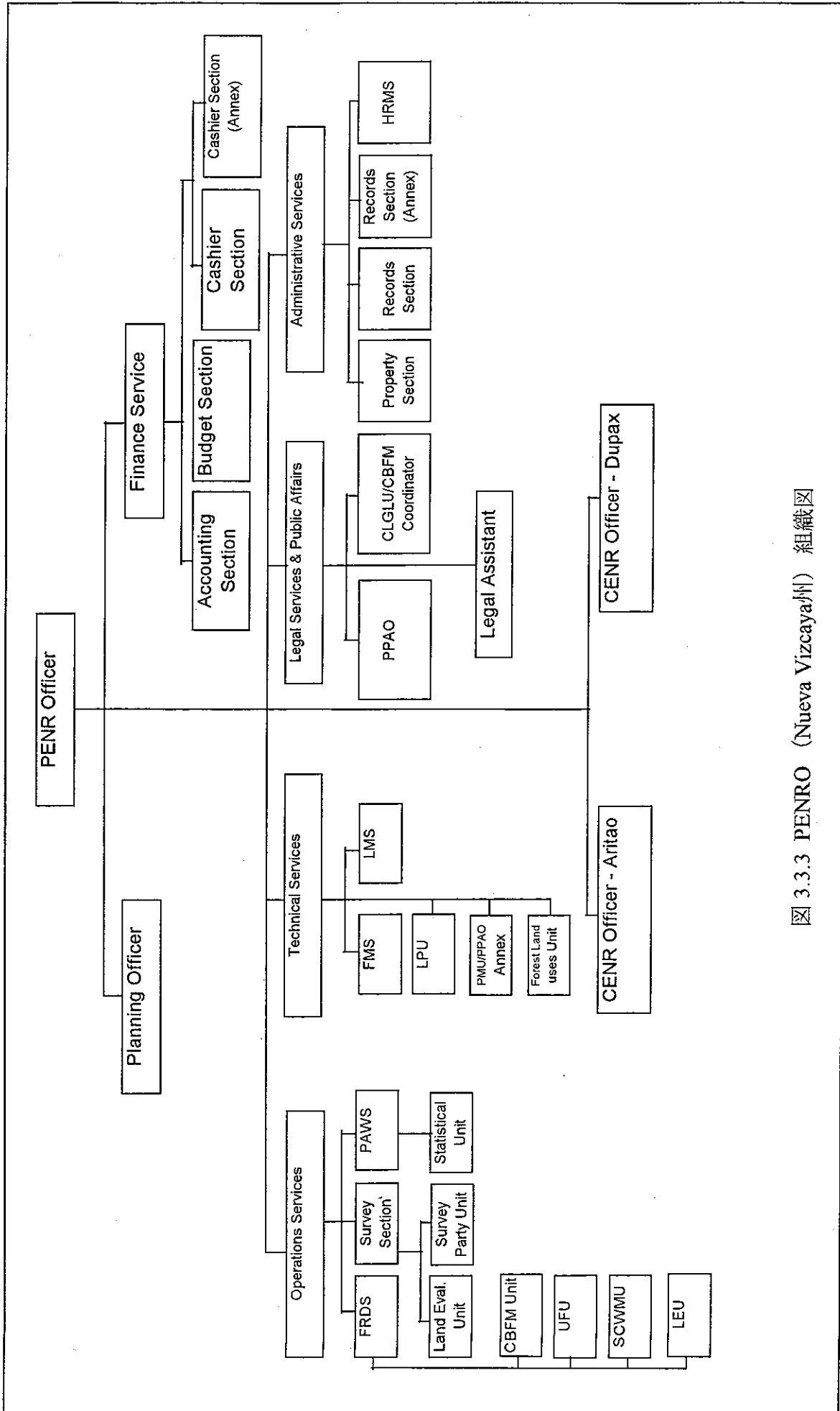


図 3.3.3 PENRO (Nueva Vizcaya州) 組織図

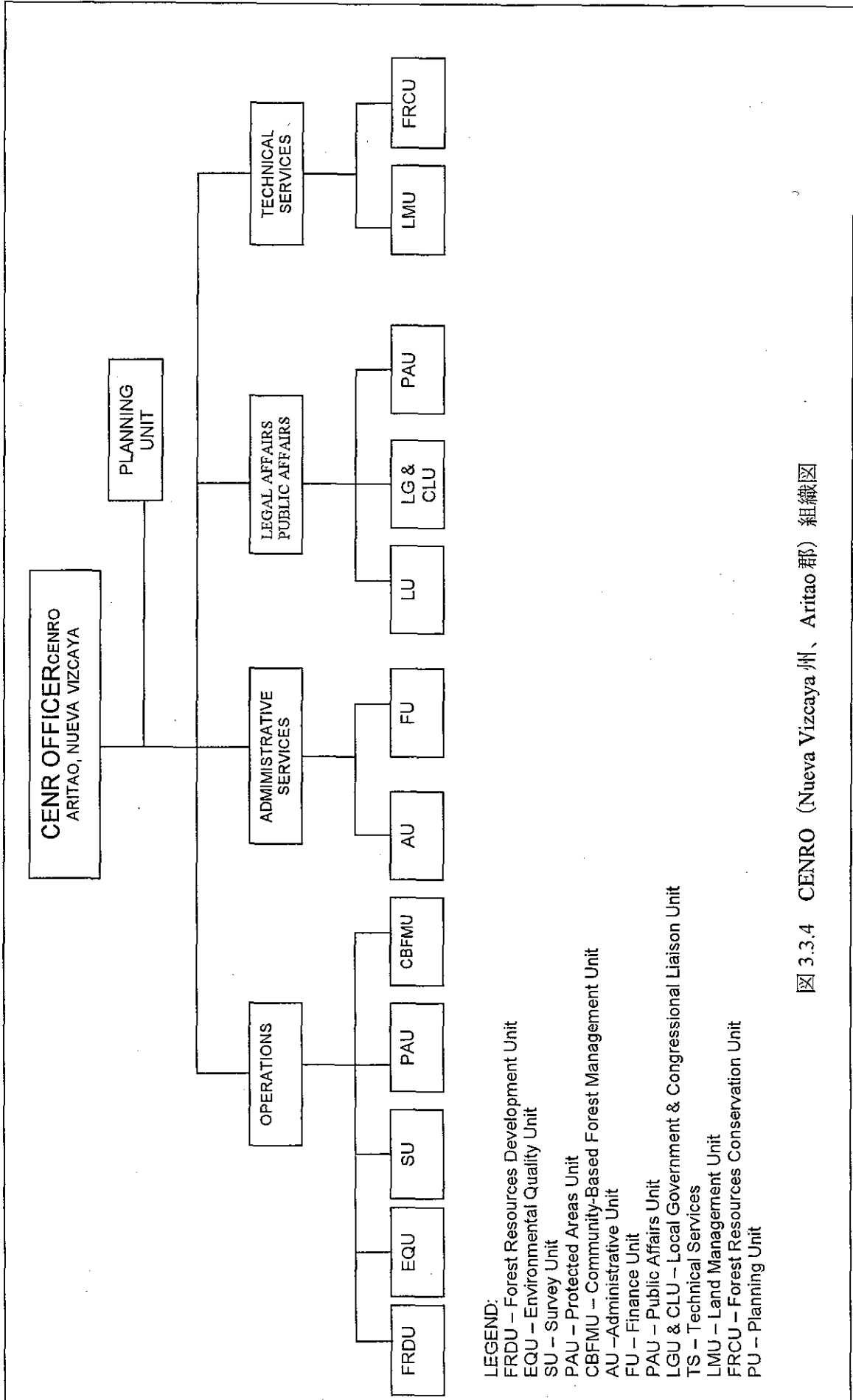


図 3.3.4 CENRO (Nueva Vizcaya 州、Aritao 郡) 組織図

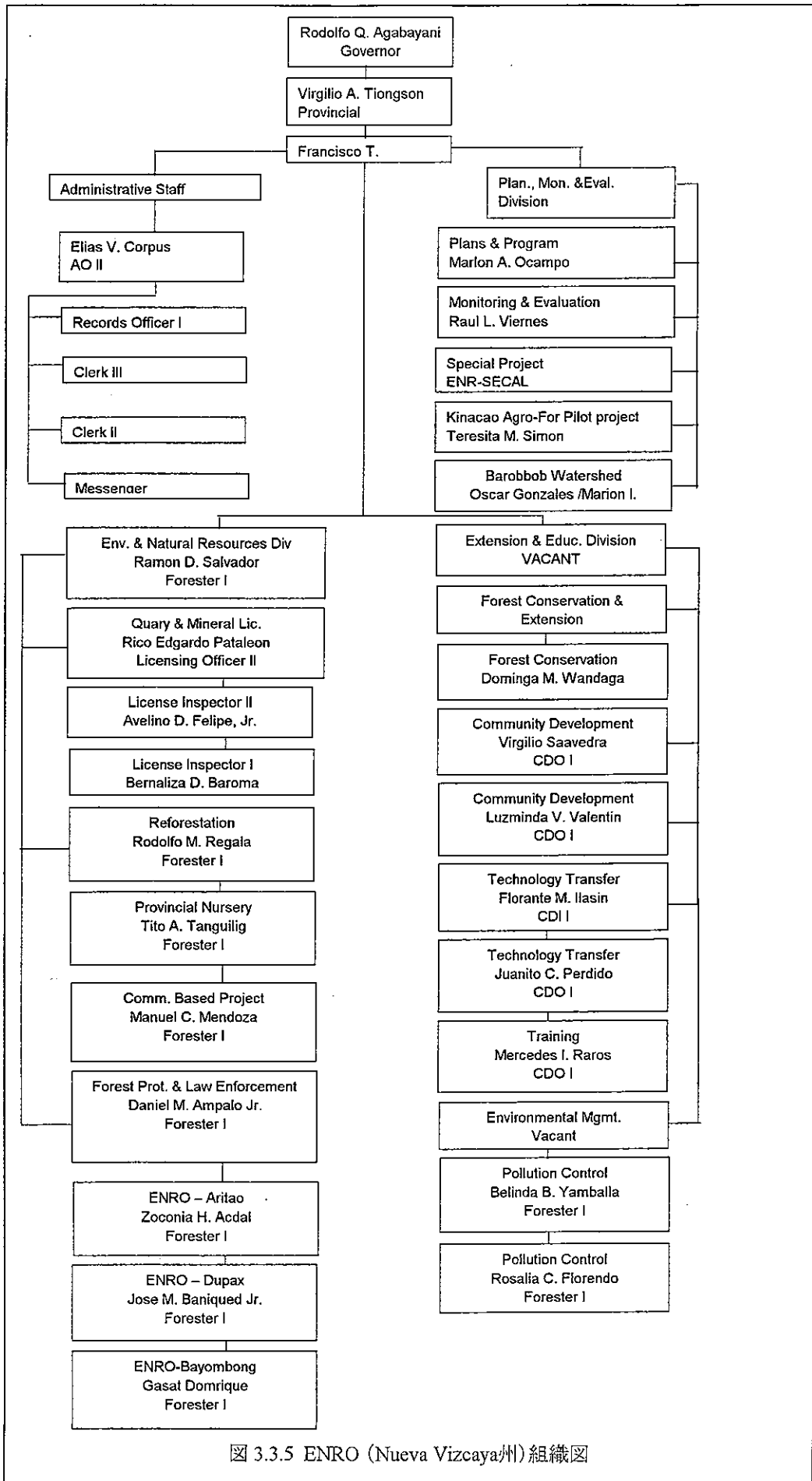


図 3.3.5 ENRO (Nueva Vizcaya州)組織図

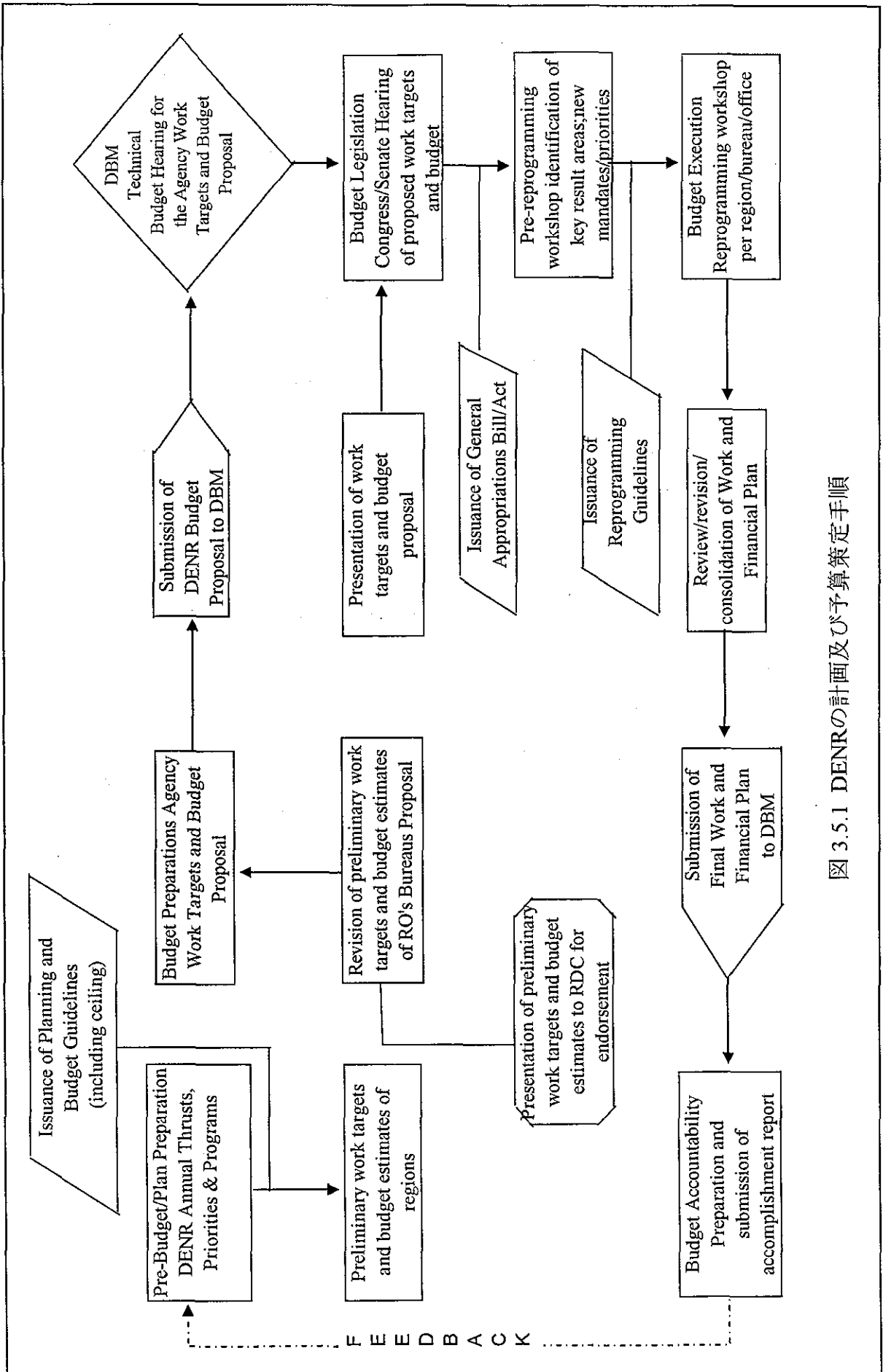
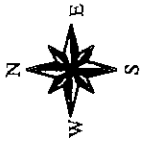


図 3.5.1 DENRの計画及び予算策定手順



Legend






-  Gently Sloping (0° - 17%)
-  Moderately Steep (18° - 29%)
-  Rolling to Steep (30° - 49%)
-  Very Steep to Steep (over 50% slope)
-  Boundary of Sub-watersheds



図 4.3.1 勾配図

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

JAPAN INTERNATIONAL COOPERATION AGENCY

Prepared by the Study Team based on digitized
topographic data from NAMRIA MAP with 1:50,000





Legend (m)

100 - 299
300 - 499
500 - 699
700 - 899
900 - 1099
1100 - 1299
1300 - 1499
1500 - 1699
1700 - 1899
1900 - 2099
2100 - 2299
2300 - 2900

図 4.3.2 標高分布図

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

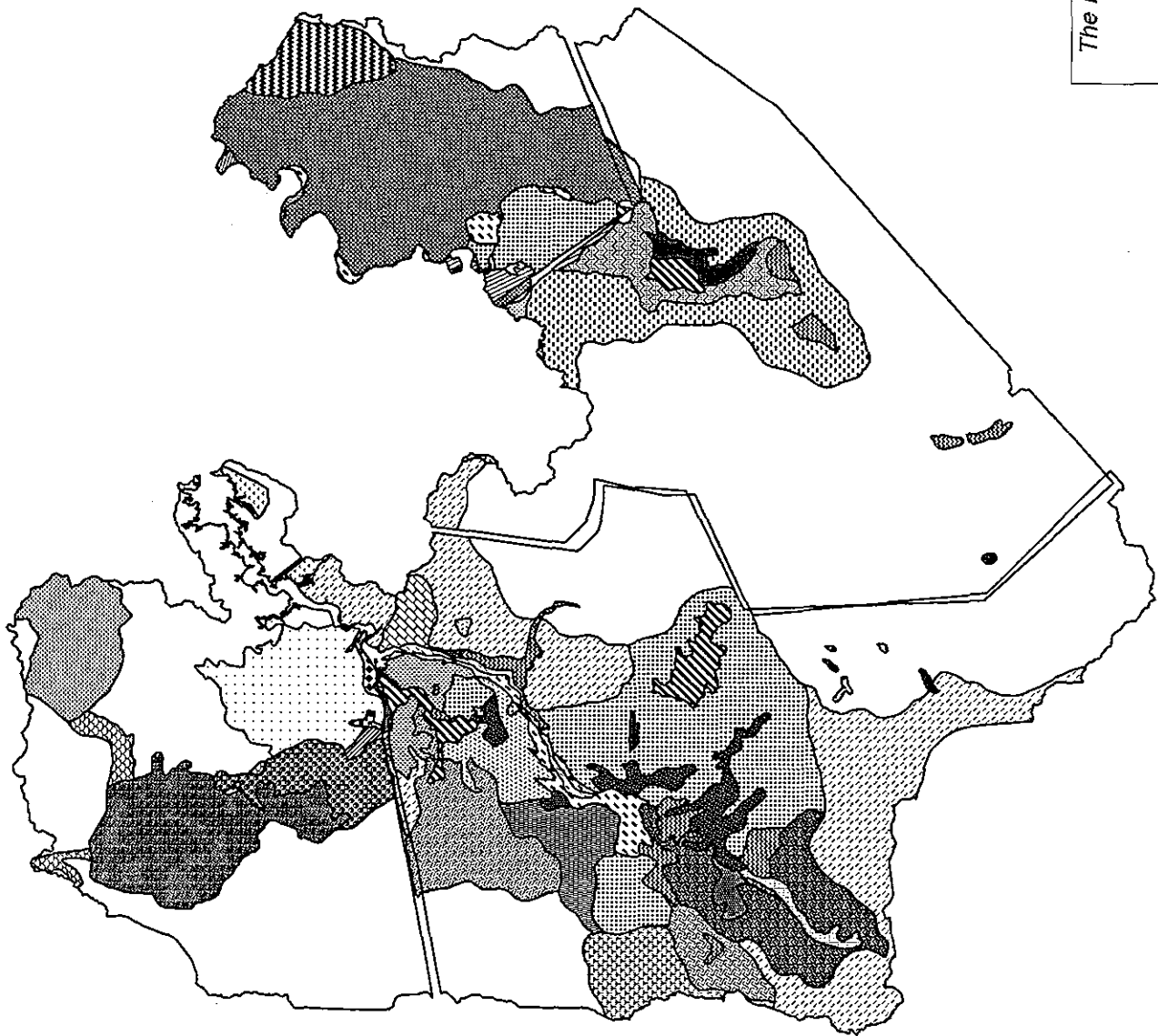
JAPAN INTERNATIONAL COOPERATION AGENCY

Source: prepared based on digitized topographic data from NAMRIA MAP with 1:50,000 scale

0 10 20 30 40 50 Kilometers



- Legend
- Alaminos clay loam
 - Annam clay loam
 - Bago clay loam
 - Bago sandy clay loam
 - Ballog clay
 - Bartlay-Bauang complex
 - Batang clay loam
 - Bolinao clay loam
 - Brooke's loam
 - Cauayan clay loam
 - Cauayan loam
 - Cauayan sandy loam
 - Guimbaon-Annam complex
 - Guimbaon clay loam
 - Guimbaon gravelly clay loam
 - Ilagan loam
 - Lagawe silty clay loam
 - Lamut sandy loam
 - Longa silty clay loam
 - Luisland clay loam
 - Maligaya clay loam
 - Mayyao clay loam
 - Mountain soils undifferentiated
 - Nayon clay loam
 - Panudupan clay loam
 - Quimbaon clay loam eroded phase
 - Quingua clay loam
 - Quingua silt loam
 - Quingua silty clay loam
 - Riverwash
 - Rockland
 - Rough Mountainous
 - Rugeo clay
 - San Juan clay
 - San Manuel fine sandy loam
 - San Manuel sandy loam
 - San Manuel silt loam
 - Sevilla clay loam
 - Sibui clay
 - Sta. Filomena clay loam
 - Sta. Maria clay
 - Umingan loam



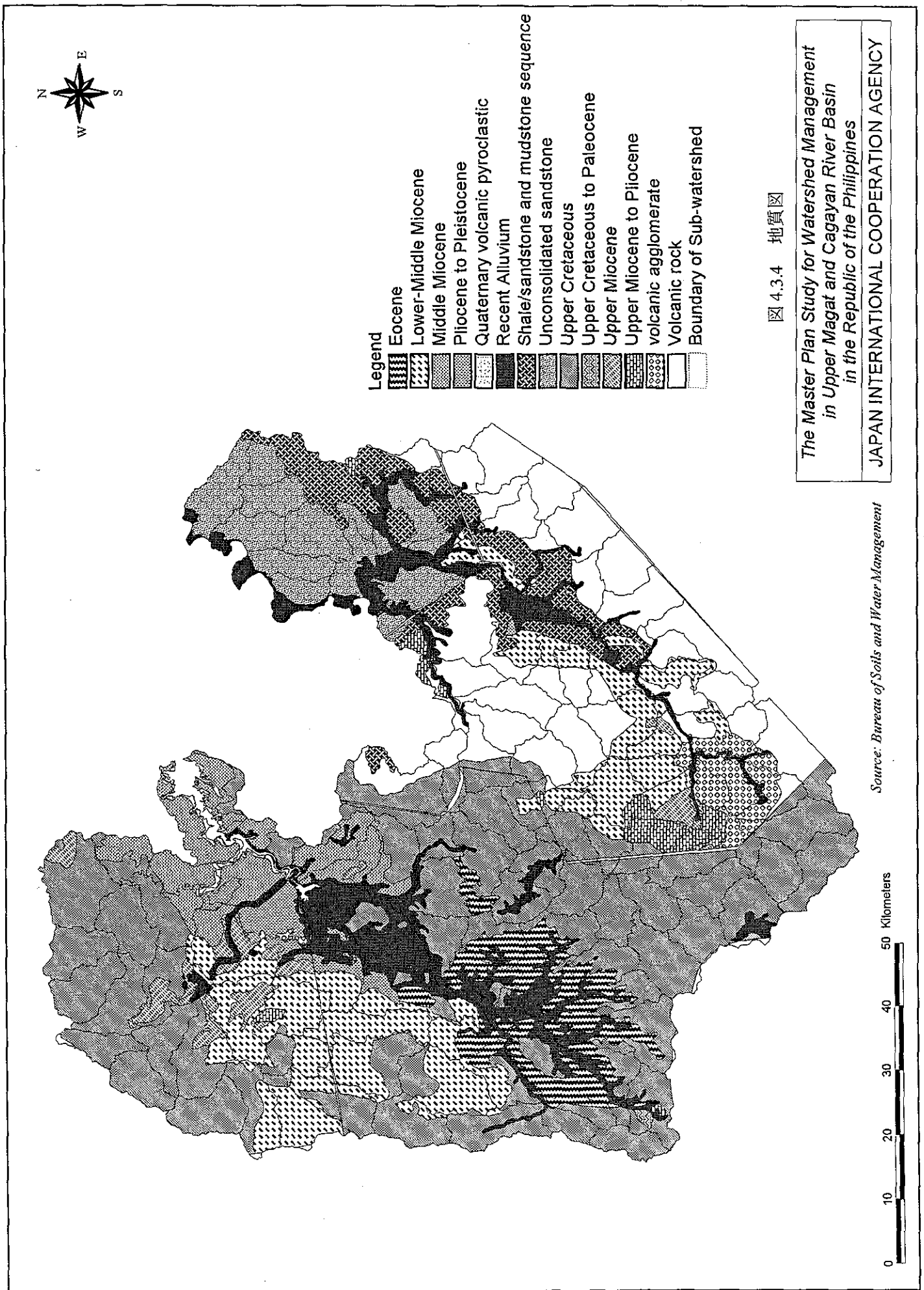
Source: Bureau of Soils and Water Management

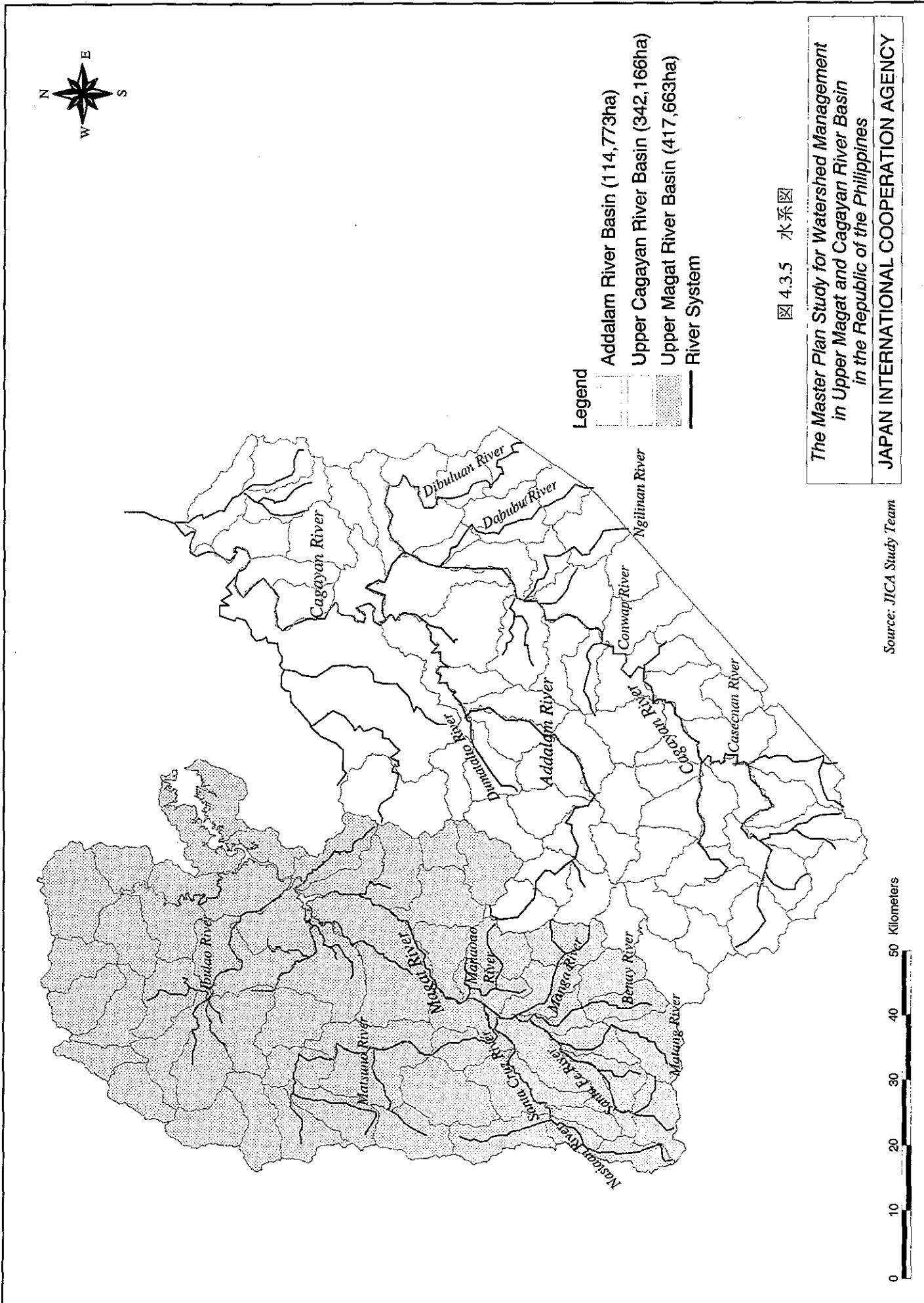
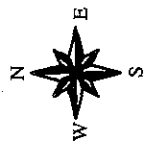


図 4.3.3 土壤図

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

JAPAN INTERNATIONAL COOPERATION AGENCY





Legend

- Addalam River Basin (114,773ha)
- Upper Cagayan River Basin (342,166ha)
- Upper Magat River Basin (417,663ha)
- River System

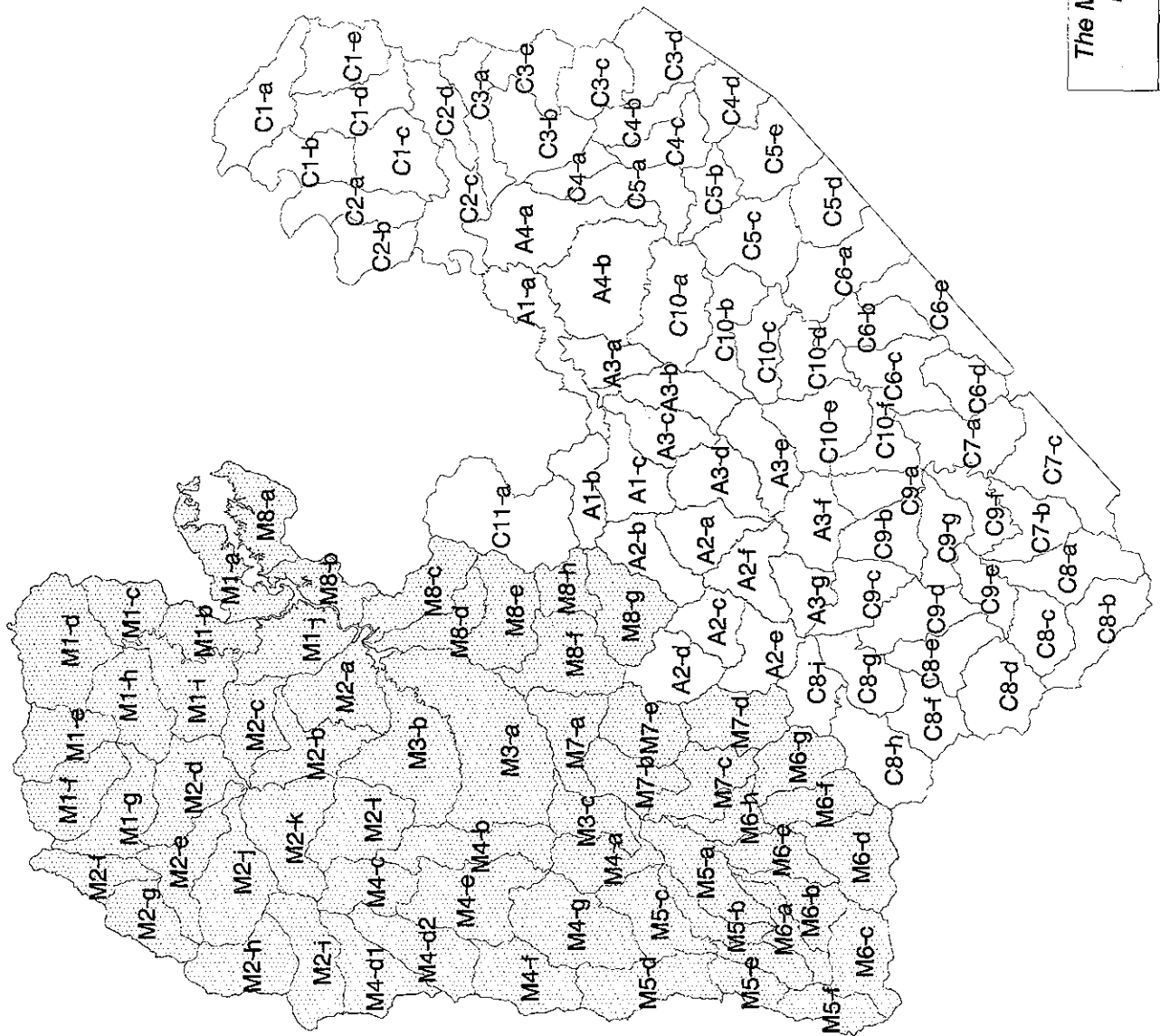
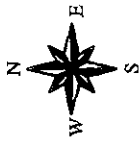
図 4.3.5 水系

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

0 10 20 30 40 50 Kilometers

Source: JICA Study Team

JAPAN INTERNATIONAL COOPERATION AGENCY



Legend

- Addalam River Basin
- Upper Cagayan River Basin
- Upper Magat River Basin

図 4.3.6 小流域図

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

Source: JICA Study Team



JAPAN INTERNATIONAL COOPERATION AGENCY

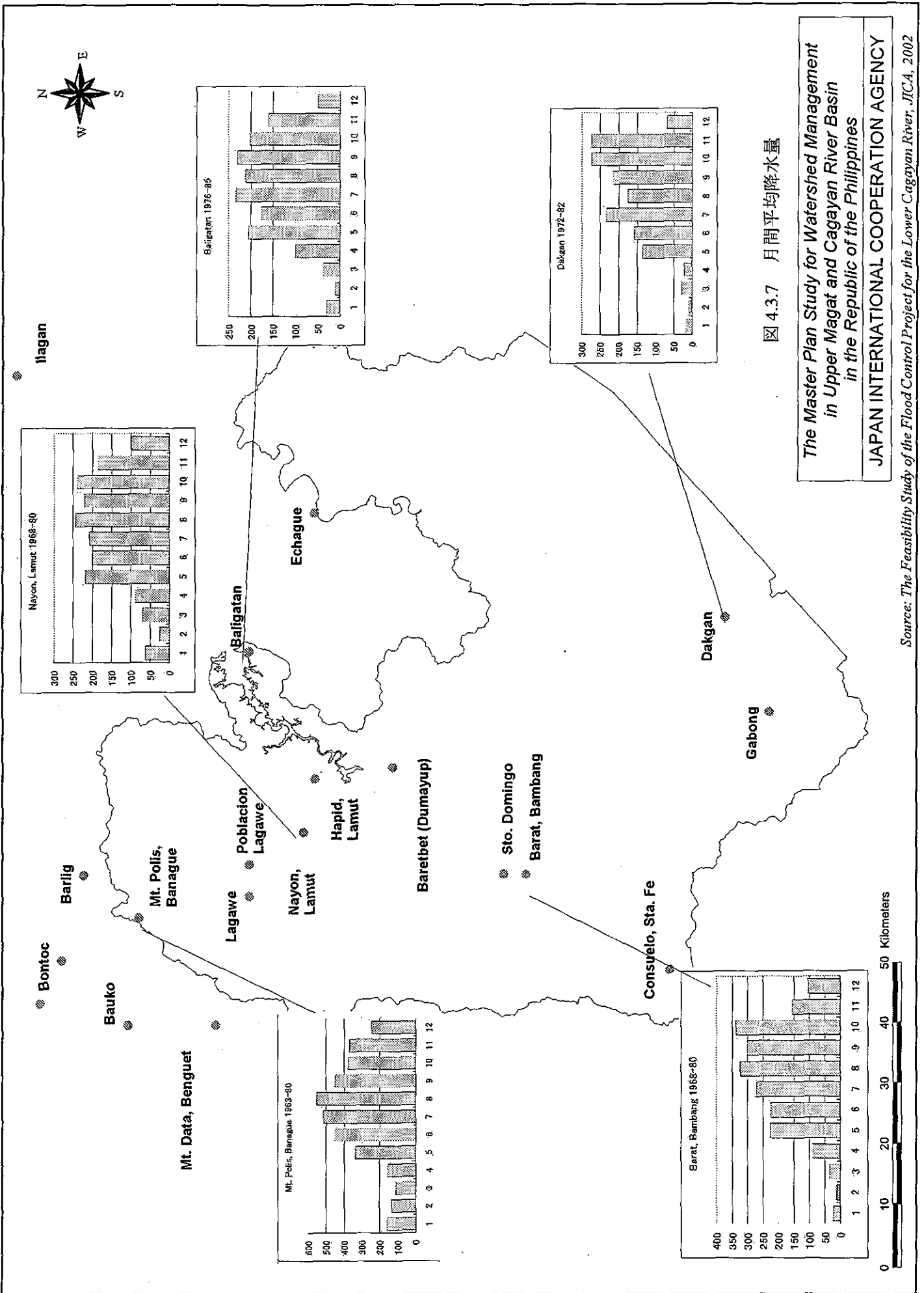


図 4.3.7 月間平均降水量

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

JAPAN INTERNATIONAL COOPERATION AGENCY

Source: The Feasibility Study of the Flood Control Project for the Lower Cagayan River, JICA, 2002

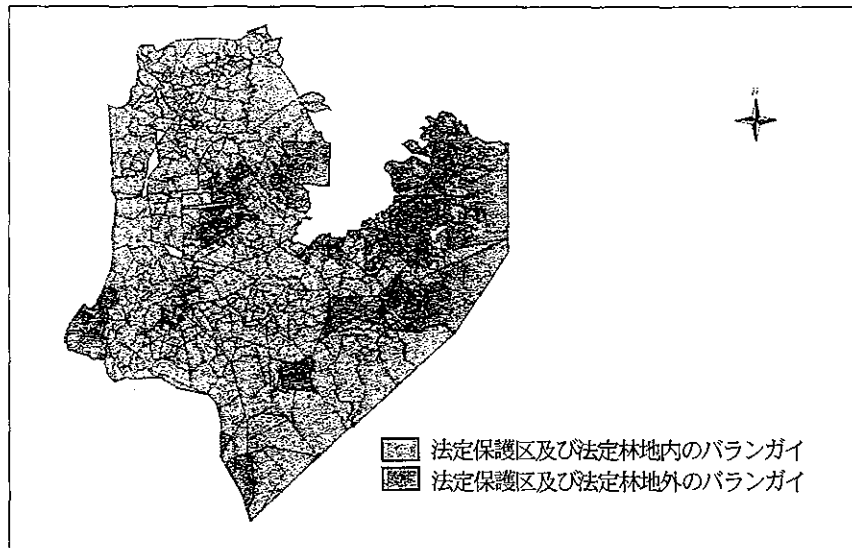


図 4.4.1 対象 408 バラングイ位置図

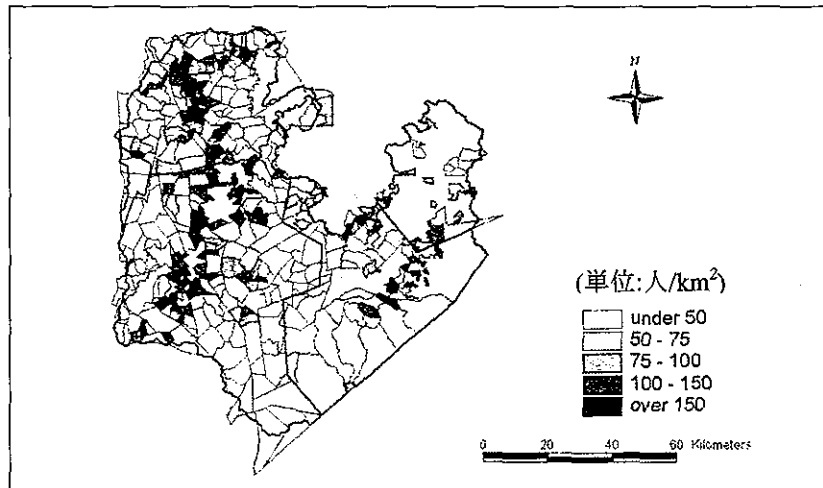


図 4.4.2 人口密度分布図

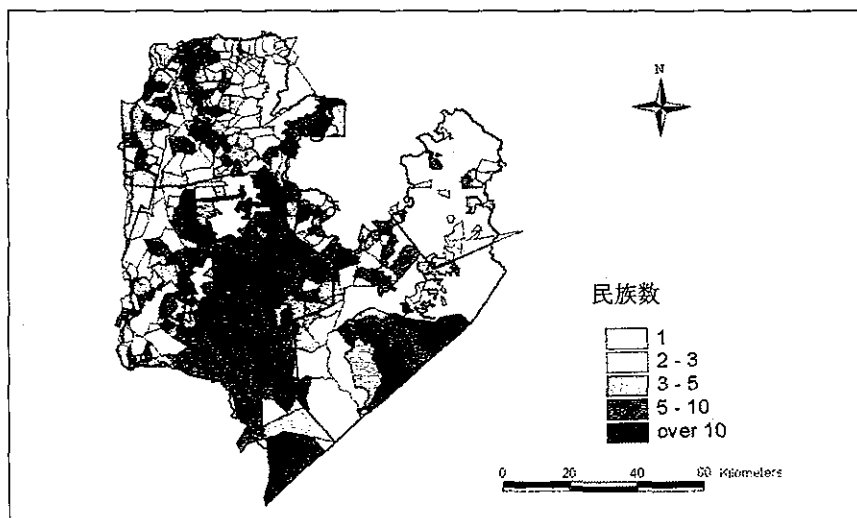


図 4.4.3 民族数分布図

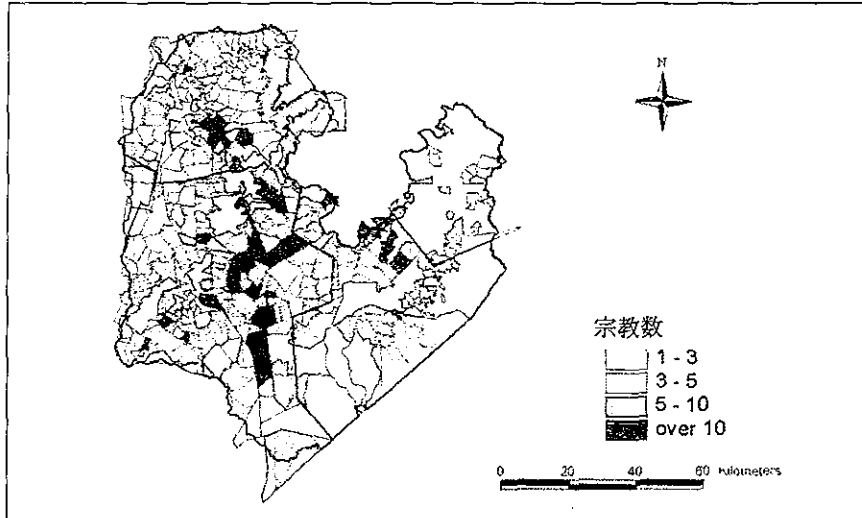


図 4.4.4 宗教数分布図

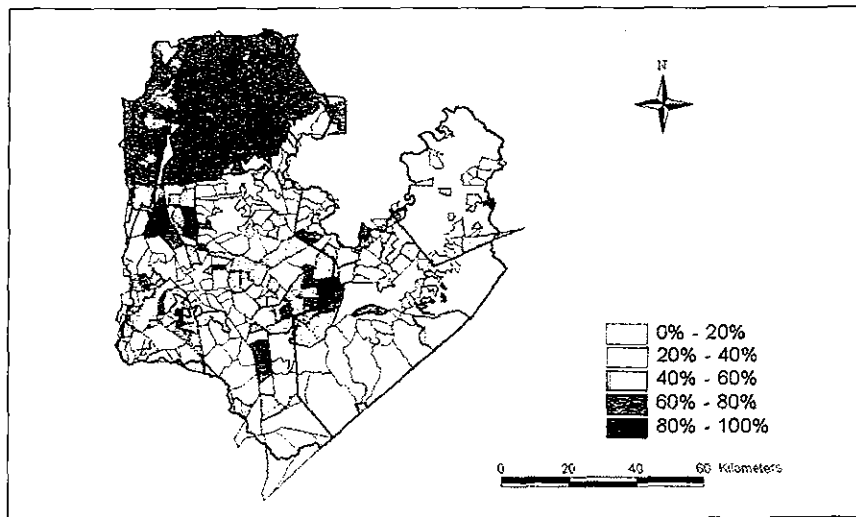


図 4.4.5 貧困人口比分布

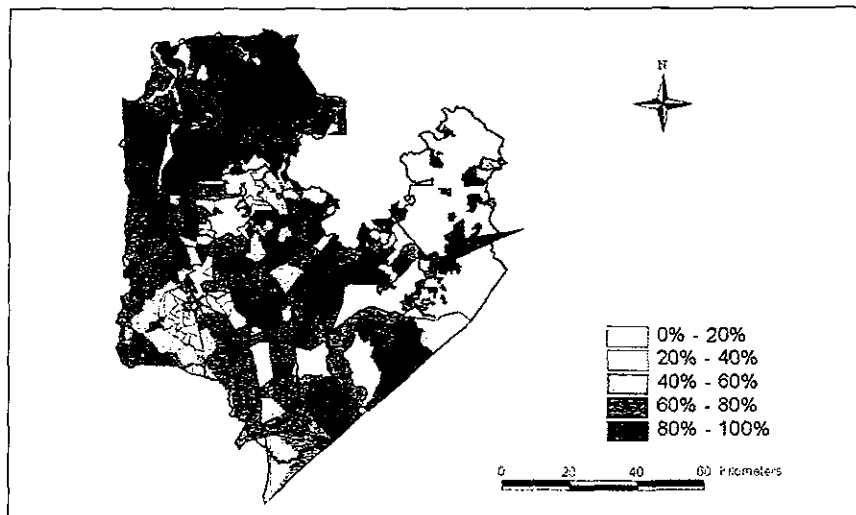
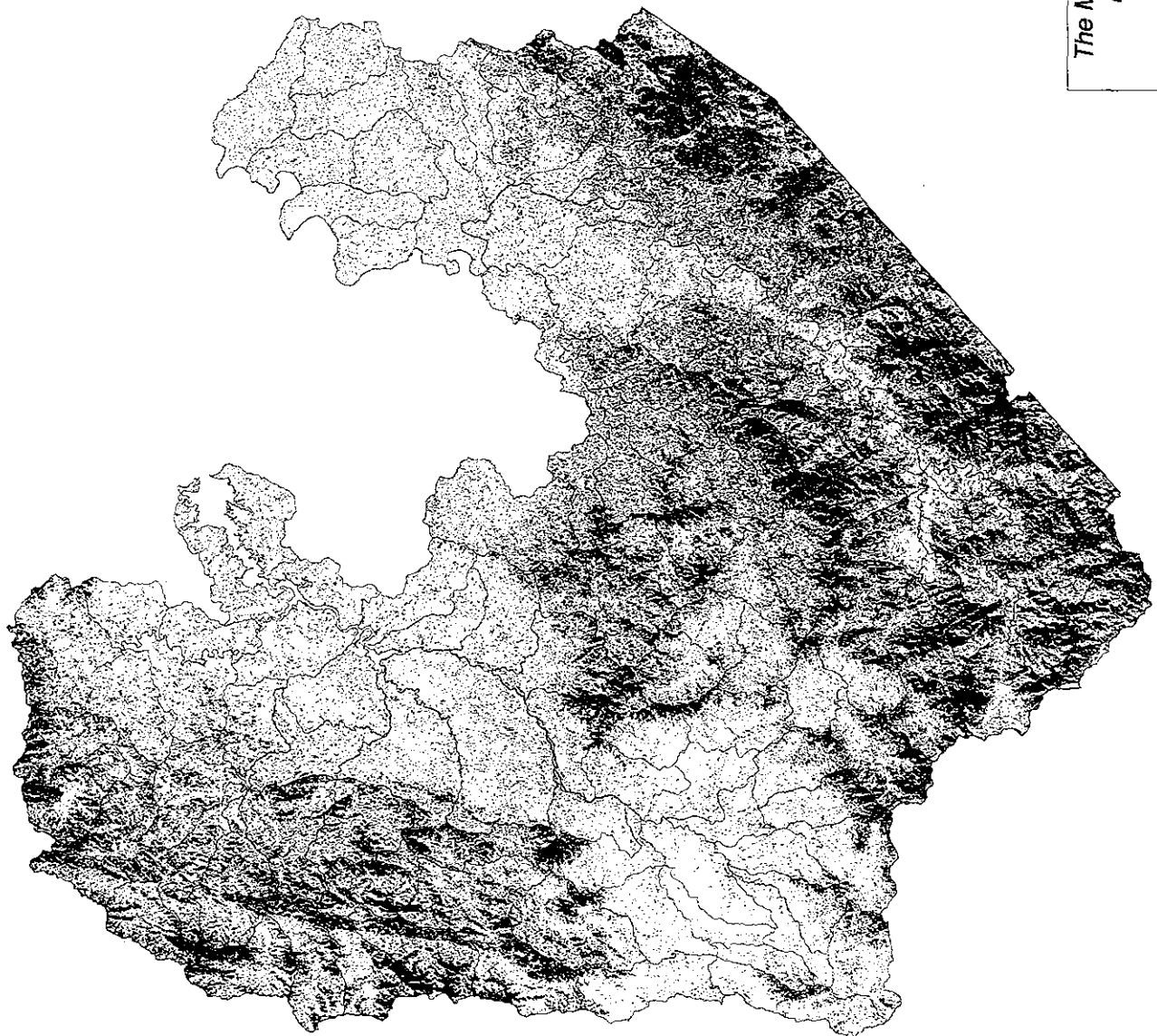
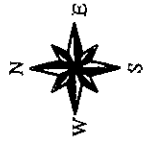


図 4.4.6 農業従事者率分布



- Legend
- Old-growth forest
 - Mossy forest
 - Residual forest
 - Sub-marginal forest
 - Pine forest
 - Reproduction brush
 - Other plantation
 - Grass land
 - Agricultural land
 - Bare /Rocky land
 - Built-up area
 - Water body
 - unclassified
 - Boundary of Sub-watersheds

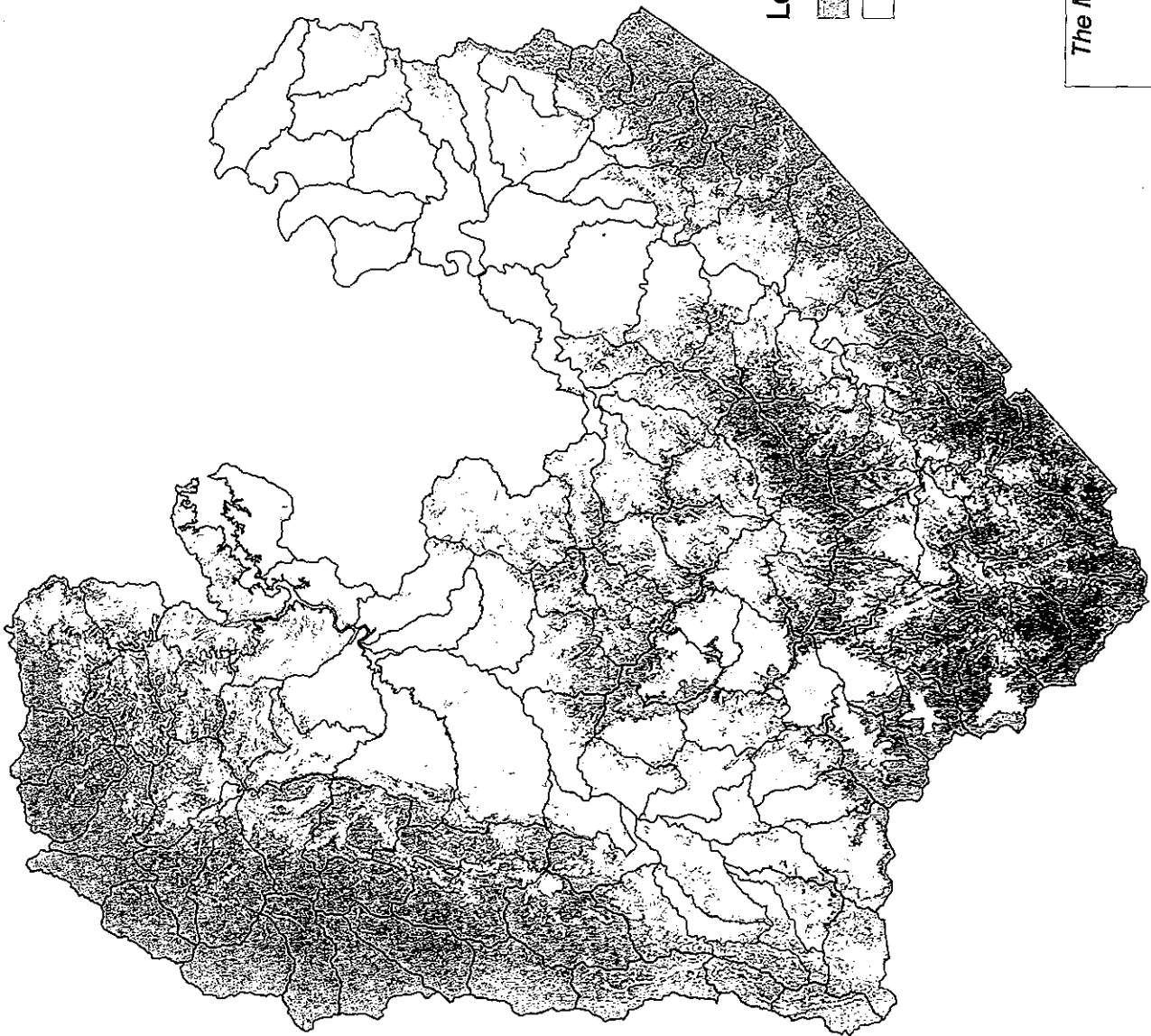
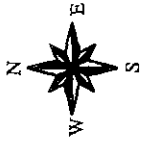
図 4.6.1 現況土地利用・植生図

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

JAPAN INTERNATIONAL COOPERATION AGENCY

Source: JICA Study Team





Legend



-  Area under the NIPAS Policy
-  Boundary of Sub-watersheds

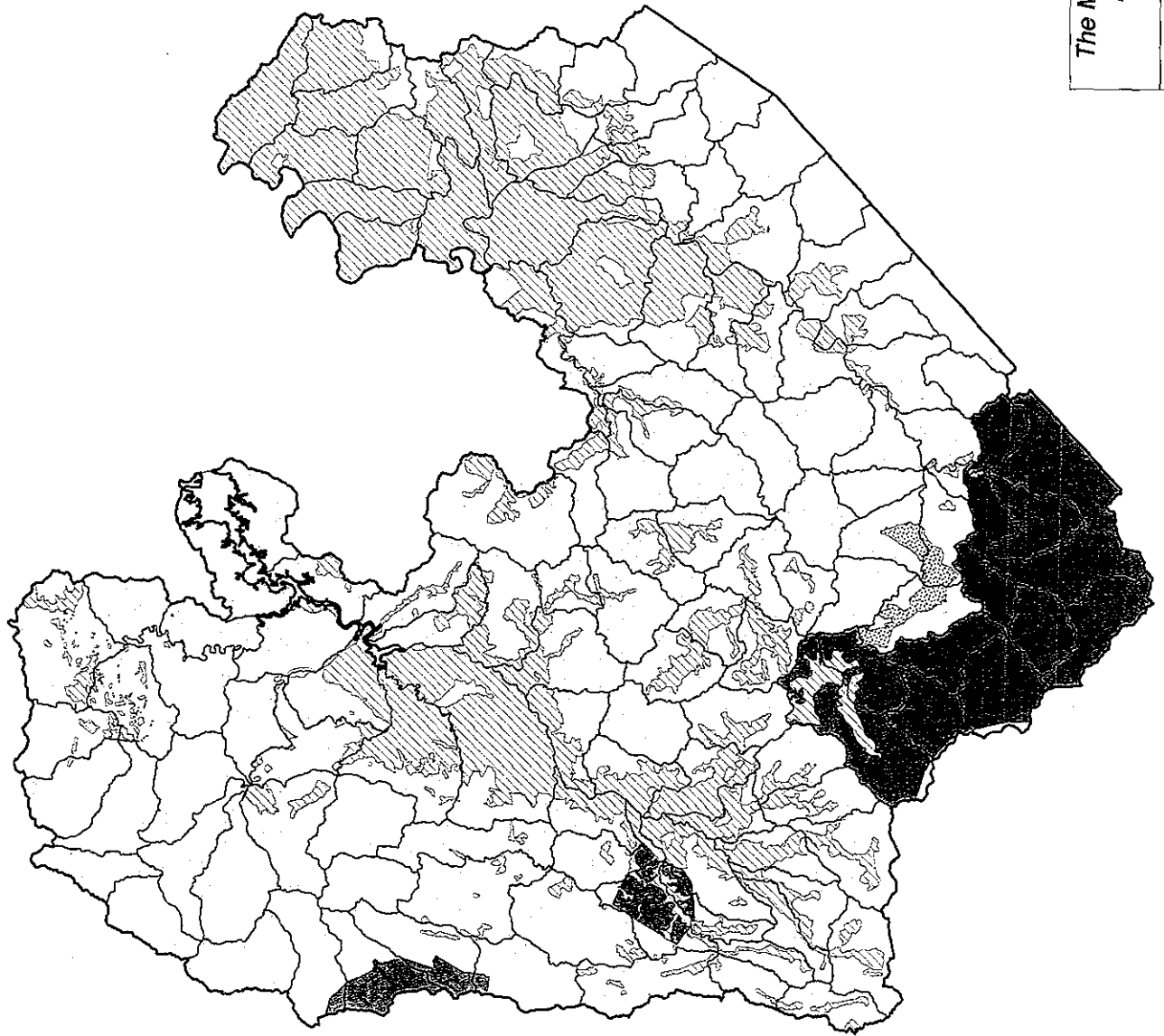
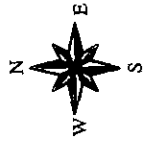
図 4.6.2 NIPAS 法に基づく保護区域図

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

JAPAN INTERNATIONAL COOPERATION AGENCY

Source: JICA Study Team





Legend






-  Alienable and Disposable land (A&D)
-  Civil Reservation
-  Forestland
-  Protected Area
-  Boundary of Sub-watersheds

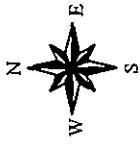
图 4.7.1 现状土地分区图

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

JAPAN INTERNATIONAL COOPERATION AGENCY

Source: DENR-PENROs (Nueva Vizcaya, Quirino, Isabela and Ifugao)





- Name of CBFM POs
- 01-Nunubatan Greenters Livelihood Association Inc.
 - 02-Fed of Responsive Assesm for Magat Ecology, Inc.
 - 03-Paligan Multipurpose Development Association
 - 04-Berrao Community Organization Inc.
 - 05-Mayoyao Environment Development Association Inc.
 - 06-Kataai Palma, Multi-purpose Cooperative Inc.
 - 07-Ayangan Dapping Agro-Forestry Development Association
 - 08-Federation of Upland Farmers of Kalingang and Kalingang Upland Farmers
 - 09-Association of Upland Farmers of Singian Nueva Vizcaya Inc.
 - 10-Sangbay Anak Integrated Farmers Association Inc.
 - 11-Buyasay Iwak Tribal Council
 - 12-Gadagad Vegetable and Fruit Tree Growers Association
 - 13-Mabasa Tree Planters and Growers Association Inc.
 - 14-Bahir Pagbiagan ti Paghan CBFM Association
 - 15-Socio-Economic and Environmental Development Cooperative Inc.
 - 16-Lar Ilcano Minority Farmers Association Inc.
 - 17-Yaway Farmers Multi-Purpose Cooperative Inc.
 - 18-Bitong Guijo Greenters Association Inc.
 - 19-Bantla Community-Based Association Inc.
 - 20-Singian Agro-Forest Association
 - 21-Gomez Farmers Multi-Purpose Cooperative Inc.
 - 22-Iligao Village Apoohan Multi-Purpose Cooperative Inc.
 - 23-Don Mariano Perez Farmers Multi-Purpose Cooperative (IVAMCO)
 - 24-Salinong T. Compenito Association Inc.
 - 25-Villa Ventura Multi-Purpose Cooperative Inc.
 - 26-Baguio Village Intercultural Association
 - 27-Hongot Livelihood Association, Inc (ILAI)
 - 28-Wasid Ilongot Tribe Association Inc. (WITAI)
 - 29-Anak Intercultural Organizer
 - 30-Kadikhan Association for Community Development (KAFCDI)
 - 31-San Manuel-Victoria Forest Developers Cooperative
 - 32-Baligt Community Forestry and Development Cooperative Inc.
 - 33-Allicia Sustainable Resource Development(ASREDECO)
 - 34-Nuh-uh-subhan, Inc.

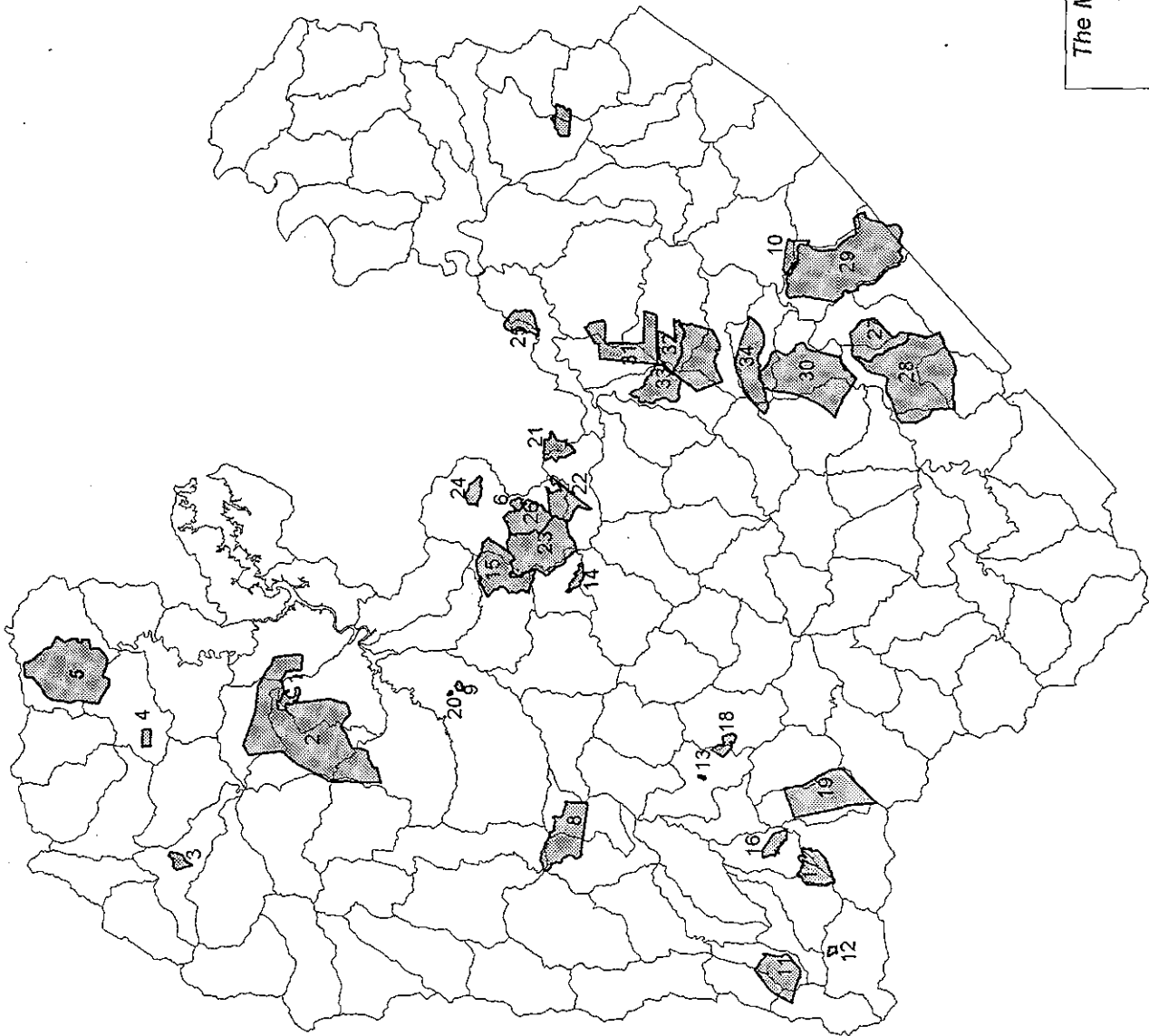
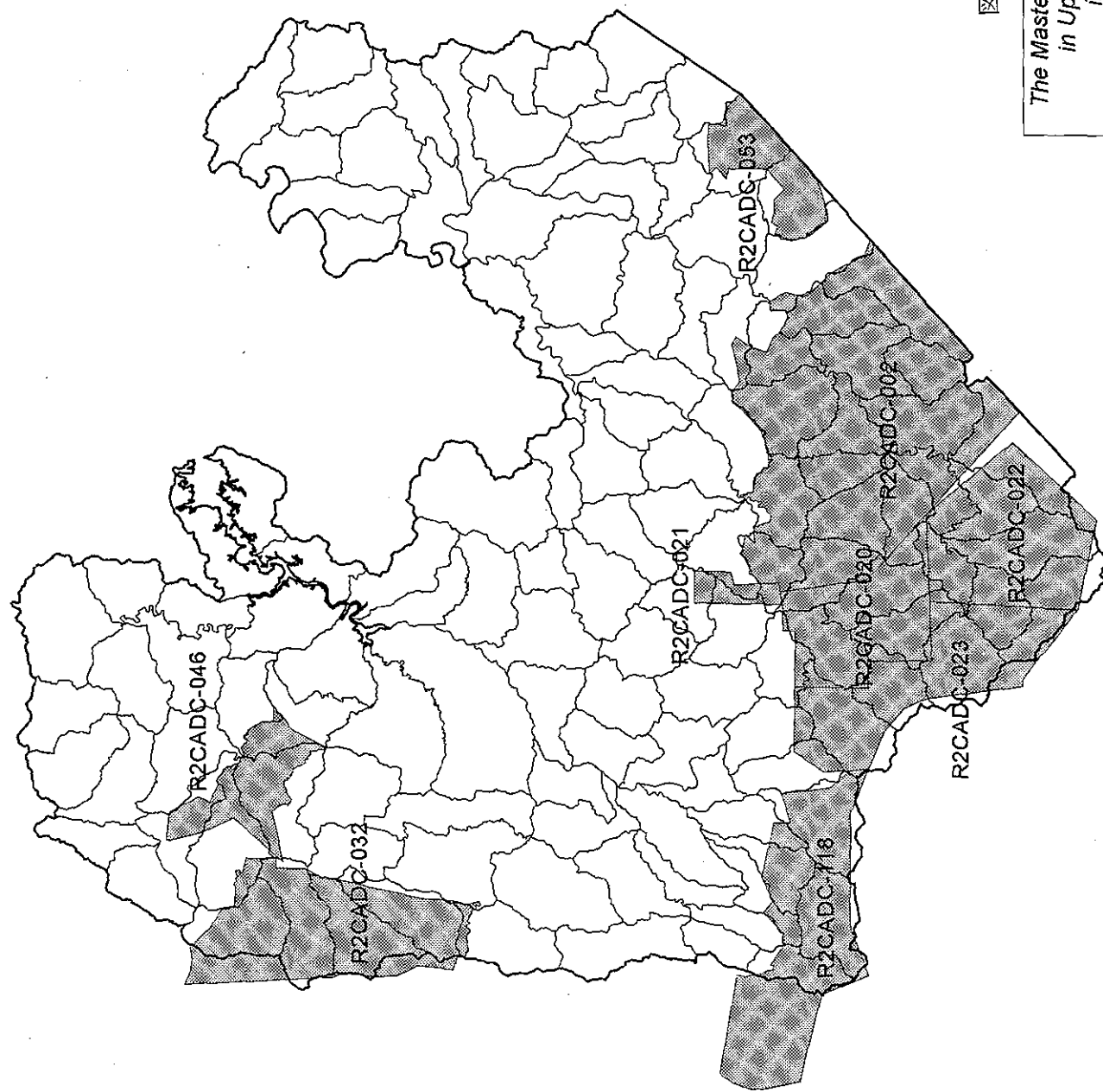
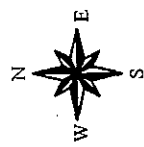


图 4.7.2 CBFM 事業地区位置图

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

JAPAN INTERNATIONAL COOPERATION AGENCY

Source: DENR-PENROs (Nueva Vizcaya, Quirino, Isabela and Ifugao)



Legend
 Sub-watershed boundary
 CADC Area

図 4.7.3 CADC 発給対象地区位置図

The Master Plan Study for Watershed Management
 in Upper Magat and Cagayan River Basin
 in the Republic of the Philippines

JAPAN INTERNATIONAL COOPERATION AGENCY

Source: DENR-PENROs (Nueva Vizcaya, Quirino, Isabela and Ifugao)



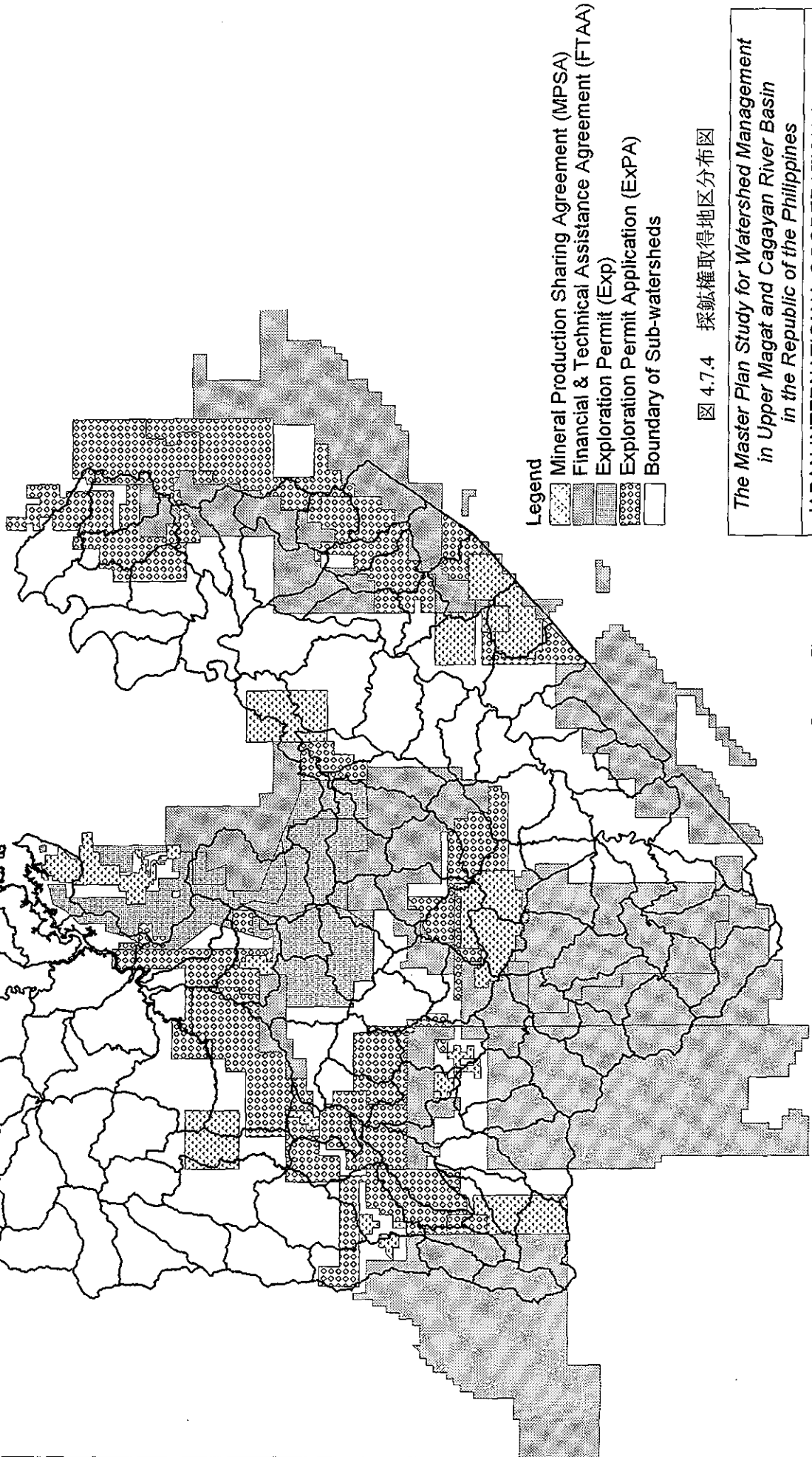
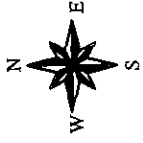


図 4.7.4 採鉱権取得地区分布図

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines
JAPAN INTERNATIONAL COOPERATION AGENCY

Source: DENR-Region2

0 10 20 30 40 50 Kilometers



Denudation Rate (mm/yr)
(Sub-watershed Basis)

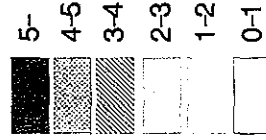


图 4.9.1 土壤流失危险度分布图

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

Source: JICA Study Team

JAPAN INTERNATIONAL COOPERATION AGENCY



Legend

● Landslip area

□ Boundary of Sub-watersheds

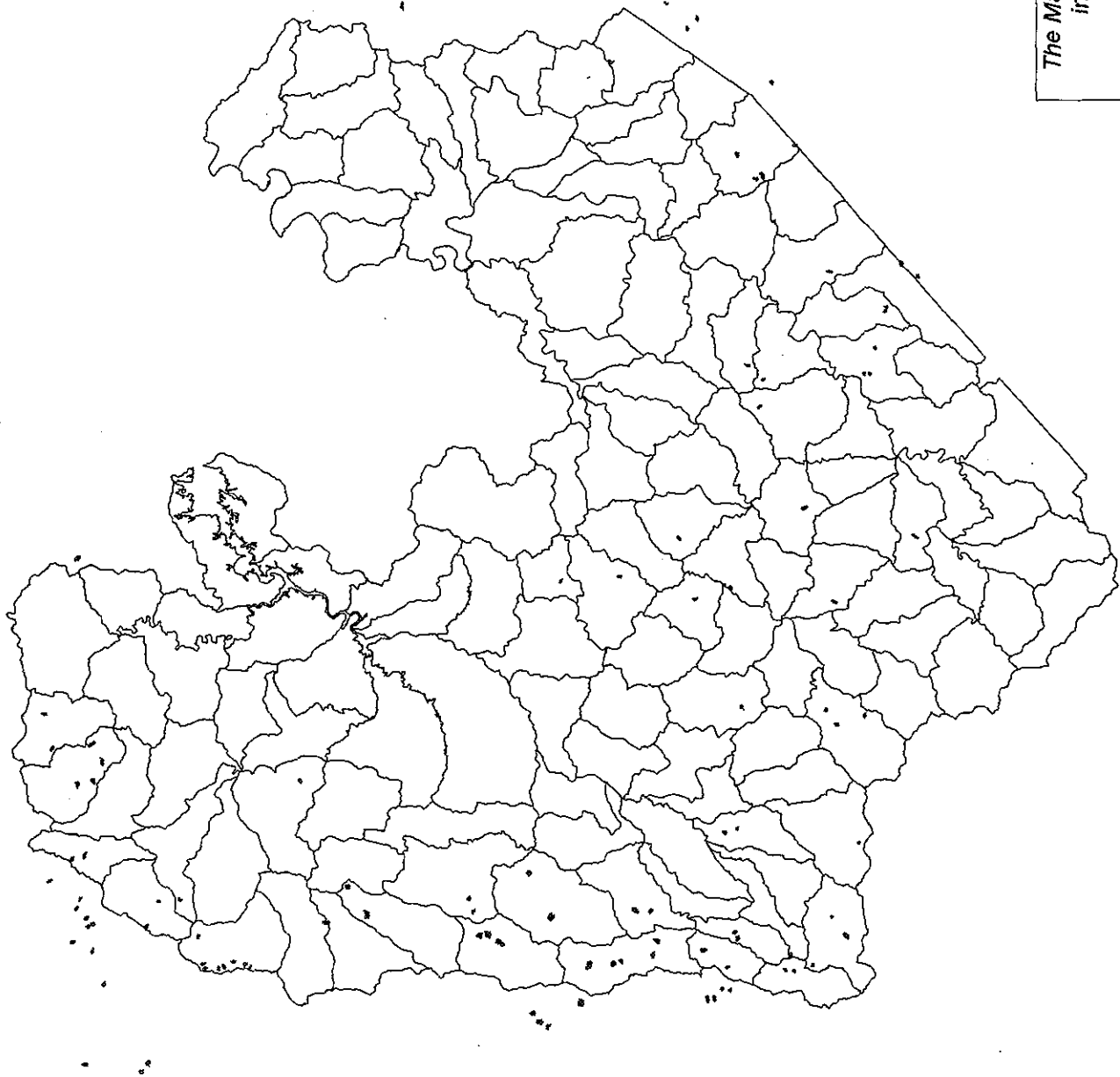
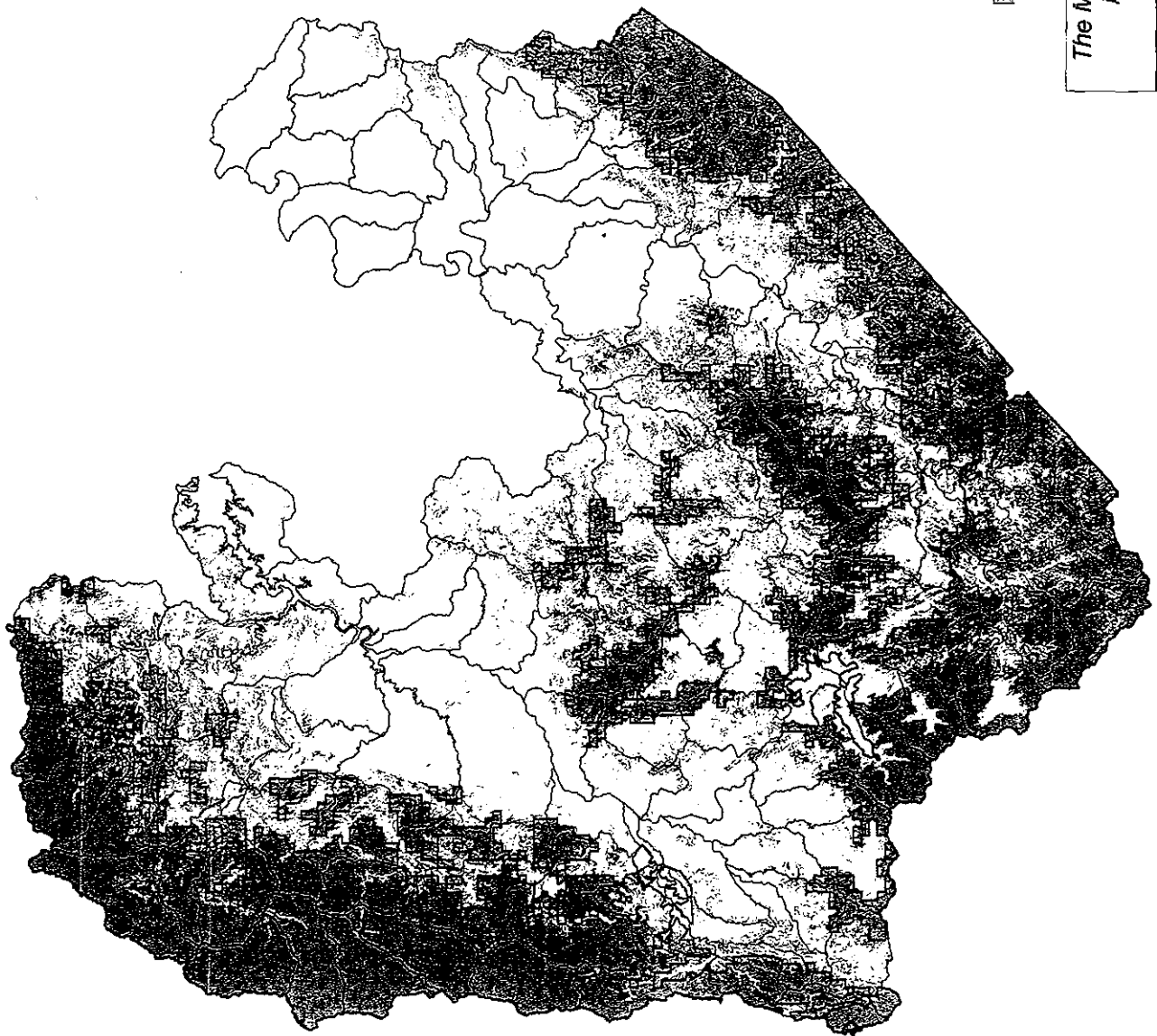
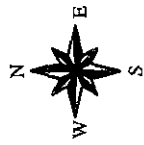


図 4.9.2 崩壊地分布図

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines
JAPAN INTERNATIONAL COOPERATION AGENCY

Source: JICA Study Team





Legend




-  Area under the NIPAS Policy
-  Proposed Protected Areas
-  Boundary of Sub-watersheds

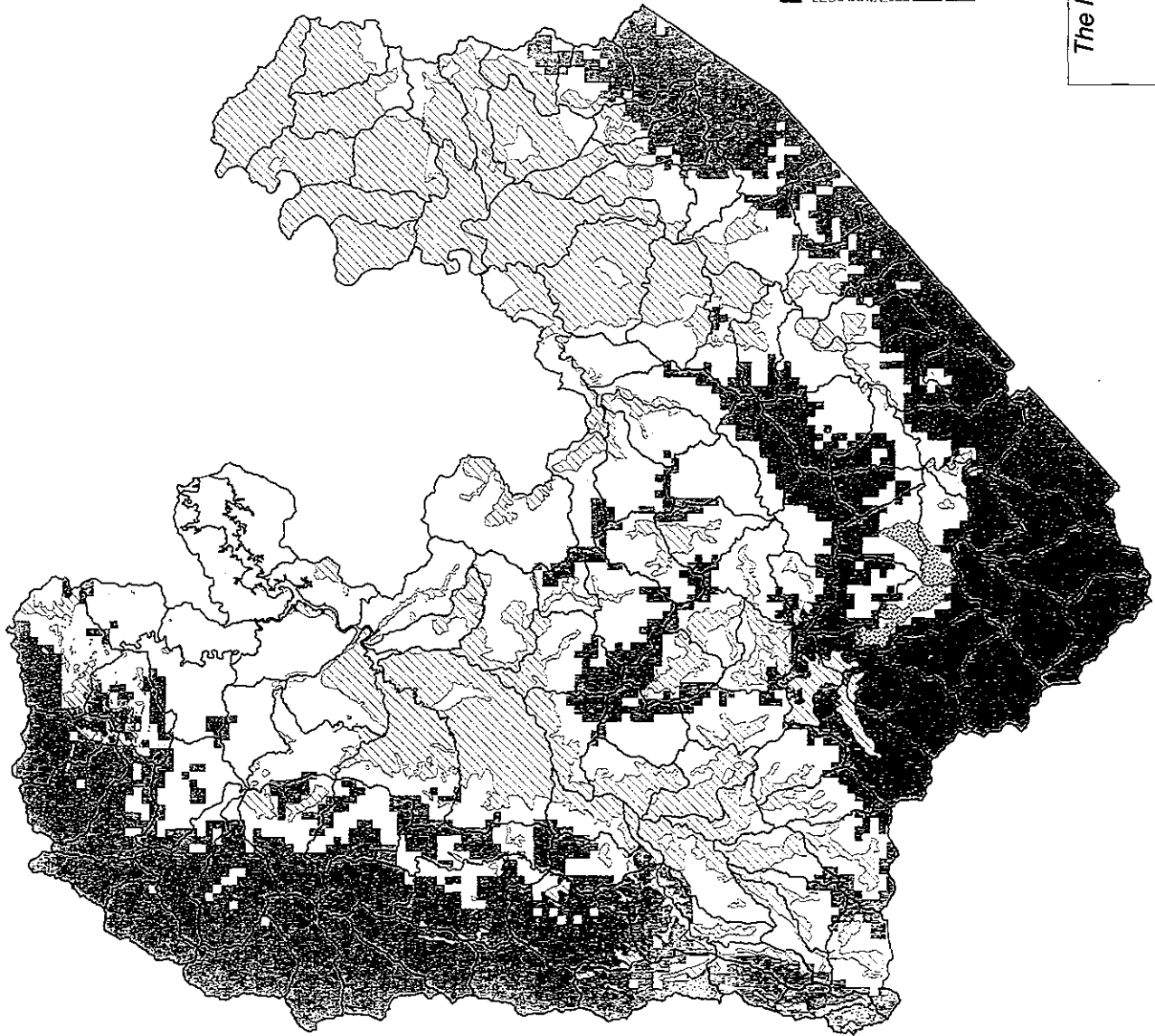
図 8.1.1 NIPAS 法に基づく法定保護区域
及び計画法定保護区分布図

*The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines*

JAPAN INTERNATIONAL COOPERATION AGENCY

Source: JICA Study Team

0 10 20 30 40 50 Kilometers



Legend
A&D
CMR
Proposed Forestland
Proposed Protected Area
Boundary of Sub-watersheds

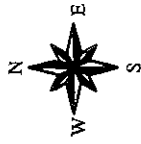
図 8.1.2 計画土地利用区分図







The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

JAPAN INTERNATIONAL COOPERATION AGENCY

Source: JICA Study Team





- Legend**
-  Man made Forest
 -  Man made forest (50%) & Residual forest with ANR (50%)
 -  Agroforestry
 -  Silvopastoral
 -  Agricultural land
 -  Boundary of Sub-watersheds

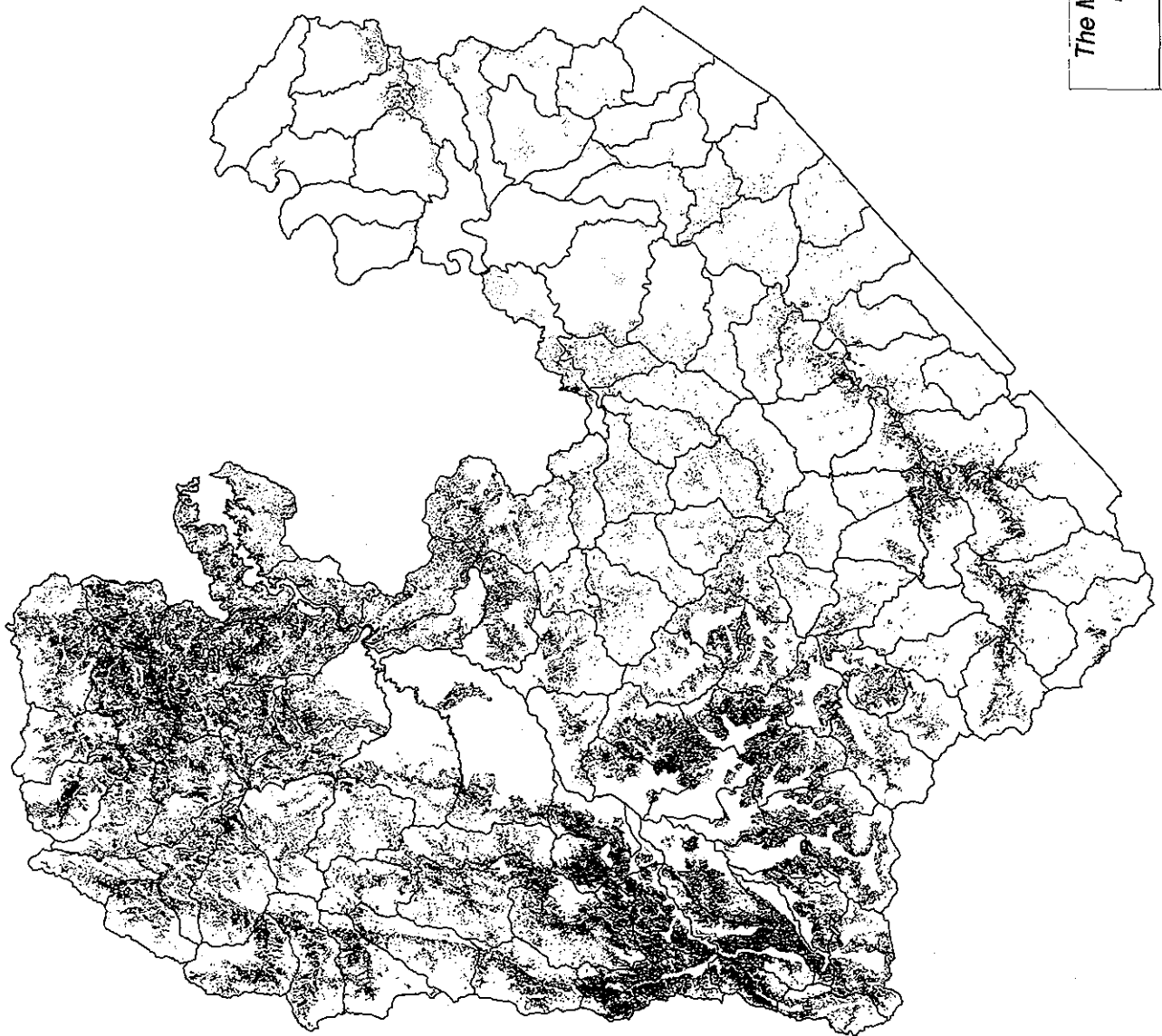


図 8.1.3 復旧事業候補地位置図

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

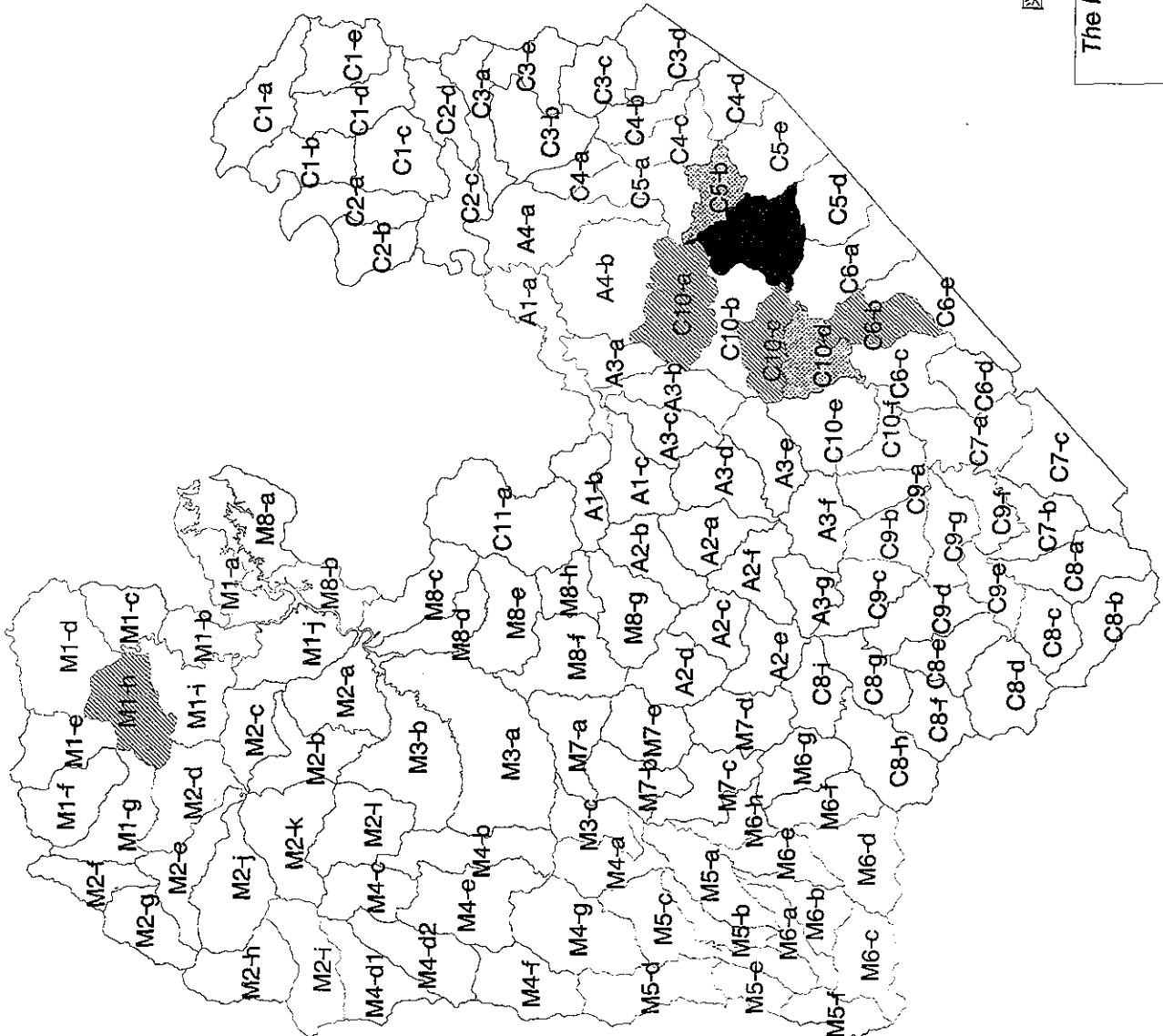
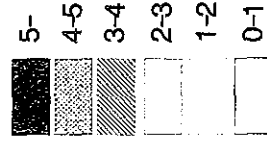
JAPAN INTERNATIONAL COOPERATION AGENCY

Source: JICA Study Team





Denudation Rate (mm/yr)
(Sub-watershed Basis)



Source: JICA Study Team

図 8.3.1 土壤流失危険度の低減効果分布図

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

JAPAN INTERNATIONAL COOPERATION AGENCY

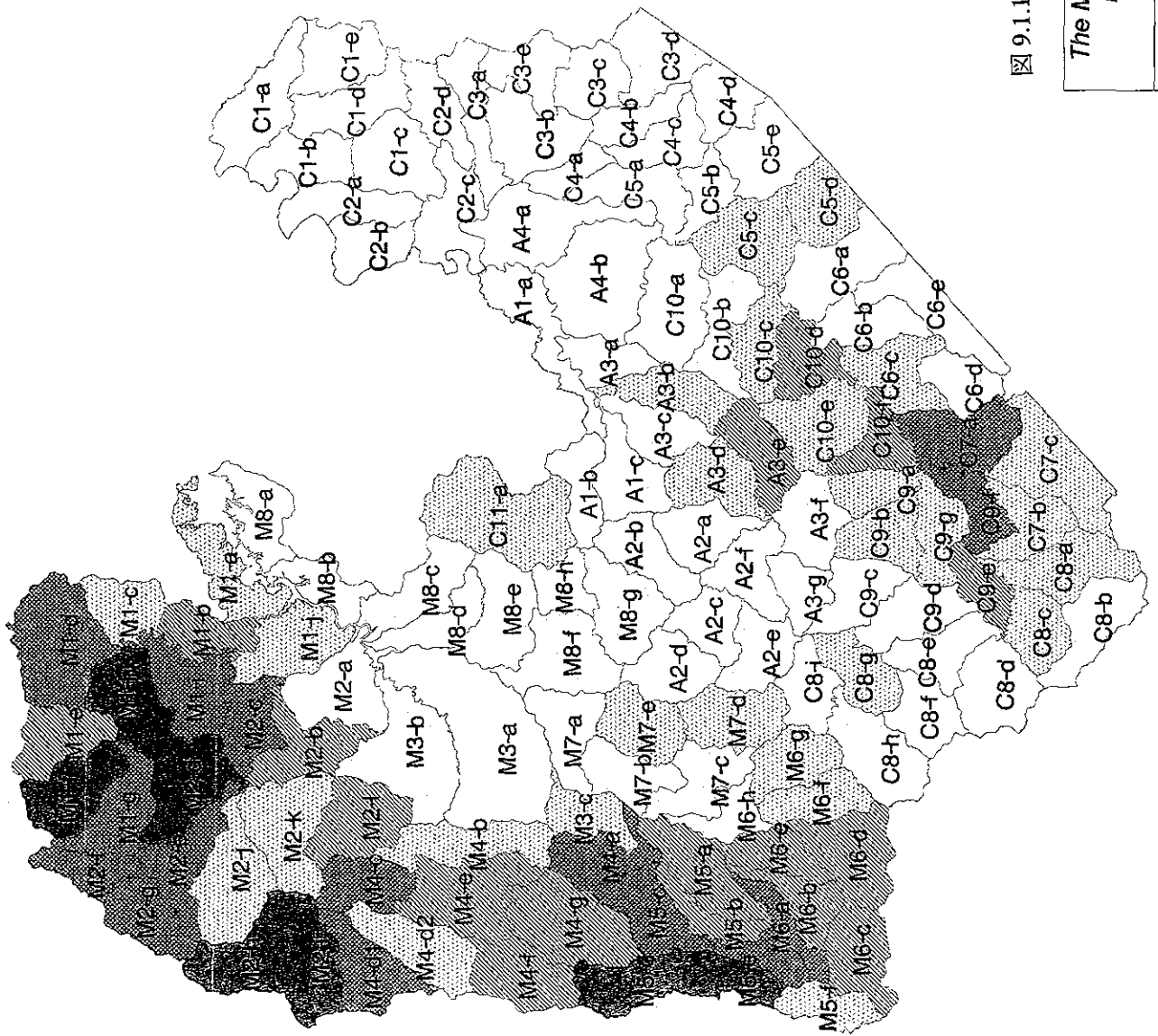
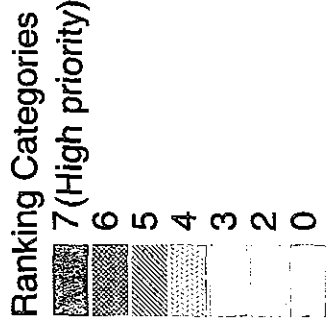


図 9.1.1 自然環境的条件による小流域優先順位分布図

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

JAPAN INTERNATIONAL COOPERATION AGENCY

Source: JICA Study Team

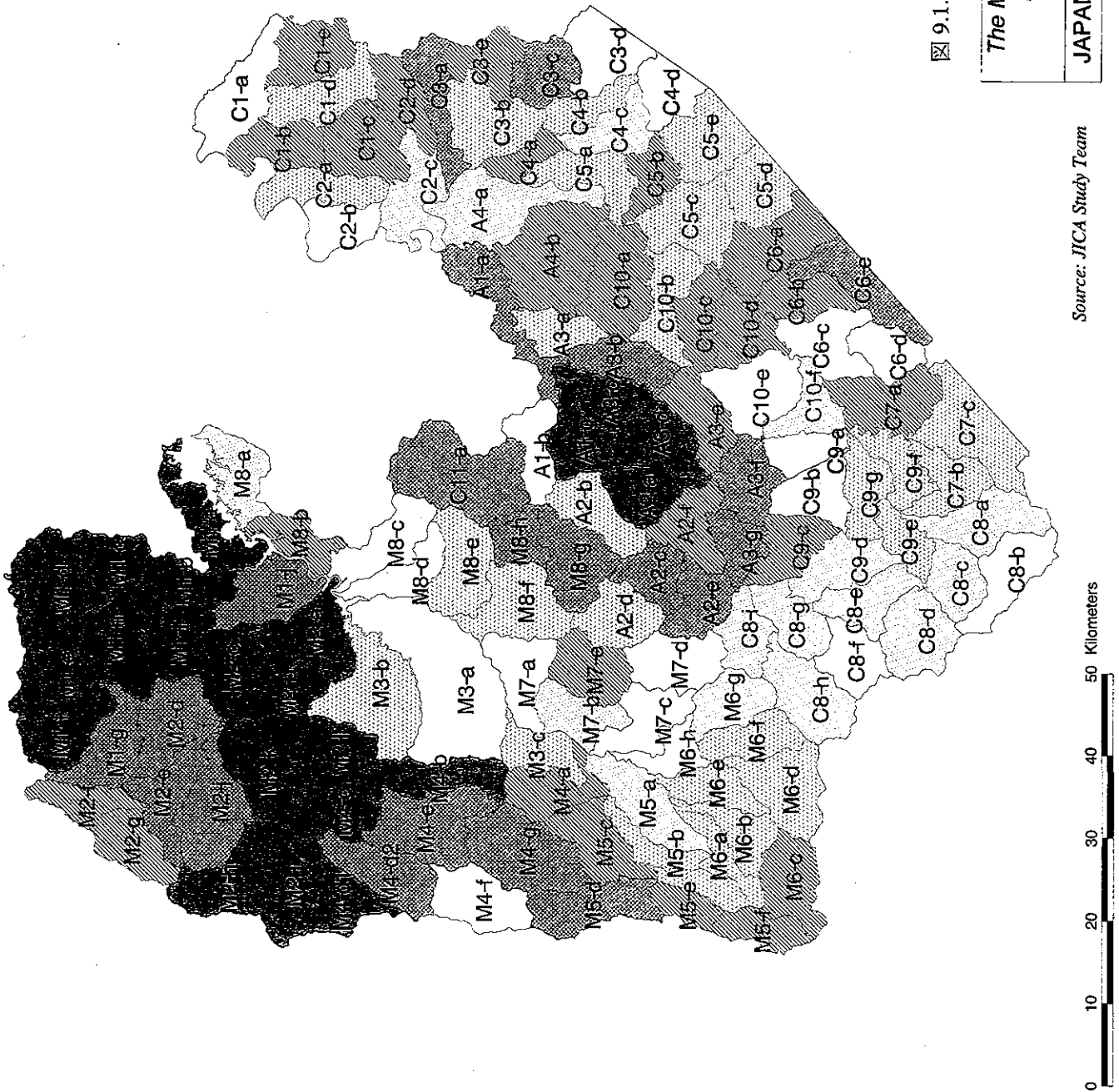
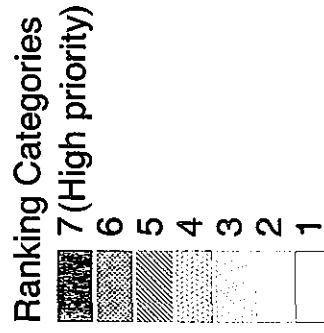
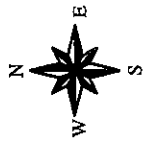


図 9.1.2 社会経済的条件による小流域優先順位分布図

The Master Plan Study for Watershed Management
in Upper Magat and Cagayan River Basin
in the Republic of the Philippines

JAPAN INTERNATIONAL COOPERATION AGENCY

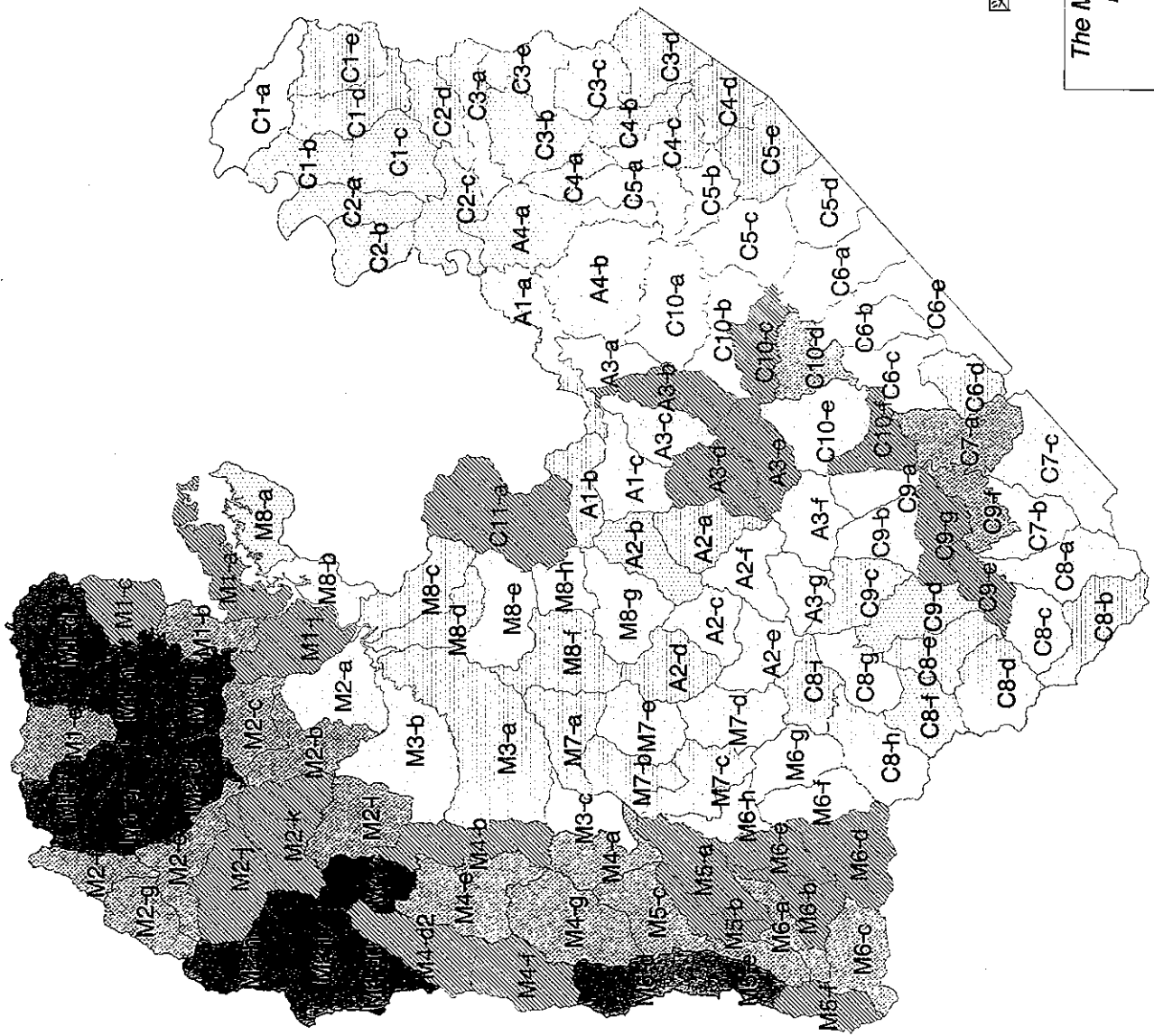
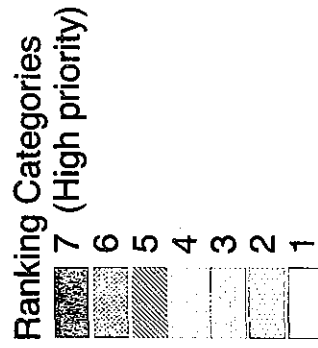
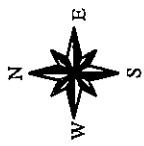


図 9.1.3 自然環境及び社会経済条件による
 小流域優先順位分布図

The Master Plan Study for Watershed Management
 in Upper Magat and Cagayan River Basin
 in the Republic of the Philippines

Source: JICA Study Team

JAPAN INTERNATIONAL COOPERATION AGENCY

