

PROJECTED TEN YEAR TRAINING REQUIREMENTS OF THE FIELD OFFICES

| Training Course | (Unit: no. of training slots & peso) | | | | | |
|---|--------------------------------------|-------------------|----------------|------------------|----------------|-------------------|
| | PIOs | | RIOs | | PIOs and RIOs | |
| | Training Slots | Costs* | Training Slots | Costs* | Training Slots | Costs* |
| Project Preparation Aspect | | | | | | |
| Project selection and prioritization | 327 | 784,800 | 79 | 189,600 | 406 | 974,400 |
| Feasibility study preparation | 340 | 816,000 | 93 | 223,200 | 433 | 1,039,200 |
| Project design | 432 | 1,036,800 | 73 | 175,200 | 505 | 1,212,000 |
| Sub-total | 1,099 | 2,637,600 | 245 | 588,000 | 1,344 | 3,225,600 |
| Project Construction/O&M Aspect | | | | | | |
| Contract management | 346 | 830,400 | 94 | 225,600 | 440 | 1,056,000 |
| Construction methods | 695 | 1,668,000 | 104 | 249,600 | 799 | 1,917,600 |
| Project cost accounting | 268 | 643,200 | 87 | 208,800 | 355 | 852,000 |
| Project monitoring and evaluation and reporting | 386 | 926,400 | 120 | 288,000 | 506 | 1,214,400 |
| Sub-total | 1,695 | 4,068,000 | 405 | 972,000 | 2,100 | 5,040,000 |
| Institutional Development/IA Aspect | | | | | | |
| Institutional development (in general) | 720 | 1,728,000 | 134 | 321,600 | 854 | 2,049,600 |
| Basic leaderships development | 921 | 2,210,400 | 165 | 396,000 | 1,086 | 2,606,400 |
| Inter-human relationship | 830 | 1,992,000 | 271 | 650,400 | 1,101 | 2,642,400 |
| Financial management | 828 | 1,987,200 | 149 | 357,600 | 977 | 2,344,800 |
| System management | 809 | 1,941,600 | 136 | 326,400 | 945 | 2,268,000 |
| IA loan management, accounting, recording, monitoring and reporting | 394 | 945,600 | 199 | 477,600 | 593 | 1,423,200 |
| Sub-total | 4,502 | 10,804,800 | 1,054 | 2,529,600 | 5,556 | 13,334,400 |
| Others | | | | | | |
| Irrigated crop diversification scheme | 630 | 1,512,000 | 188 | 451,200 | 818 | 1,963,200 |
| Others** | 333 | 799,200 | 318 | 763,200 | 651 | 1,562,400 |
| Sub-total | 963 | 2,311,200 | 506 | 1,214,400 | 1,469 | 3,525,600 |
| Total | 8,259 | 19,821,600 | 2,210 | 5,304,000 | 10,469 | 25,125,600 |
| Training Ratio (Training slots to total no. of employees) | 1.5 | | 1.1 | | 1.4 | |

* Based on the average estimate of Peso 480.00 per training slot per day for 5 days for each training course.

** Include administrative and other courses.

Source of basic data: Annex Table E2-05 and interview of NIA officials.

NUMBER OF MAJOR EQUIPMENT FOR PIOs

| Equipment | No. of Equipment | | | |
|---|-------------------|--------------------|-----------------|-------------------|
| | Available | Provided under | Additionally | Total |
| | as of 1990 (1) | Foreign Aid (2) | Required (3) | (4) = (1)+(2)+(3) |
| I. Office Equipment | | | | |
| 1. Blue Printing Machine | 21 | 24 | 22 | 67 |
| 2. Copy Machine | 18 | 0 | 50 | 68 |
| II. Survey Equipment | | | | |
| 1. Transit | 100 | 67 | 306 | 473 |
| 2. Auto-Level | 157 | 67 | 264 | 488 |
| 3. Current Meter | 76 | 67 | 7 | 150 |
| III. Construction Equipment & Vehicles | | | | |
| 1. Tractor Dozer/Crawler | 167 | 0 | 64 | 231 |
| 2. Excavator | 103 | 13 | 83 | 199 |
| 3. Dump Truck | 214 | 67 | 22 | 303 |
| 4. Stake Truck/Ordinary Truck | 58 | 67 | 58 | 183 |
| 5. Tanker (Water/Fuel) | 5 | 0 | 62 | 67 |
| 6. Portable Concrete Mixer | 126 | 67 | 32 | 225 |
| 7. Concrete Vibrator | 13 | 28 | 128 | 169 |
| 8. Concrete Vibrator | 77 | 23 | 82 | 182 |
| 9. Roller/Compactor | 26 | 67 | 85 | 178 |
| 10. Water Pump | 240 | 335 | 36 | 611 |
| 11. Generator | 57 | 0 | 242 | 299 |
| 12. 4WD | 142 | 0 | 71 | 213 |
| 13. Pick-up | 151 | 80 | 116 | 347 |

**SUMMARY OF COSTS FOR PIO's FACILITIES
AND EQUIPMENT REQUIREMENTS**

| (I) PIOs' Building | | | | |
|--|-----------------|-----------------------|-----------------------|--------------------|
| (Unit: Peso 1,000) | | | | |
| Building | Space (sq.m) | Unit Cost (P/sq.m) | Amount | |
| 1 Administration Office | | | | 43,150 |
| 1) New Construction | 6,390 | 4,000 | | 25,560 |
| 2) Rehabilitation | 17,590 | 1,000 | | 17,590 |
| 2 Equipment Shed | | | | 17,295 |
| 1) New Construction | 15,855 | 1,000 | | 15,855 |
| 2) Rehabilitation | 5,760 | 250 | | 1,440 |
| Sub-Total (1) | | | | 60,445 |
| <hr/> | | | | |
| (II) PIOs' Equipment | | | | |
| (Unit: Peso 1,000) | | | | |
| Item | Capacity | Required Number | Unit Cost (P1,000) | Amount (P1,000) |
| 1 Construction Equipment and Vehicles | | | | |
| 1.1 New Procurement | | | | |
| 1) Bulldozer | 11 ton | 64 | 2,380 | 152,320 |
| 2) Backhoe | 0.45qm | 83 | 1,960 | 162,680 |
| 3) Dump Truck | 8 tons | 22 | 952 | 20,944 |
| 4) Ordinary Truck | 6 tons | 58 | 672 | 38,976 |
| 5) Fuel Tank Truck | 1,000 lit | 62 | 840 | 52,080 |
| 6) Potable Concrete Mixer | 1 bagger | 32 | 45 | 1,440 |
| 7) Welding Machine | 200 amps | 128 | 118 | 15,104 |
| 8) Concrete Vibrator | 40 mm | 82 | 22 | 1,804 |
| 9) Vibrator Roller | 1.0 tons | 85 | 308 | 26,180 |
| 10) Water Pump | 100 mm, 12 HP | 36 | 42 | 1,512 |
| 11) Generator | 20 KVA | 242 | 168 | 40,656 |
| 12) 4-Wheel Vehicle | Diesel | 71 | 286 | 20,306 |
| 13) Pick-up | 4-WD | 116 | 378 | 43,848 |
| 14) Spare Parts | | | | 115,570 |
| (Sub-total) | | | | 693,420 |
| 1.2 Repair & Spare Parts for Existing Equipment | | | | 355,967 |
| Total (Item 1) | | | | 1,049,387 |
| <hr/> | | | | |
| 2 Office Equipment | | | | |
| 1) Blue Printing Machine | | 22 | 62 | 1,364 |
| 2) Copying Machine | | 50 | 112 | 5,600 |
| 3) Calculator | | 95 | 2 | 190 |
| 4) Planimeter | | 67 | 14 | 938 |
| Total (Item 2) | | | | 8,092 |
| <hr/> | | | | |
| 3 Survey and Hydraulic Equipment | | | | |
| 1) Transit | | 306 | 76 | 23,256 |
| 2) Automatic Level | | 264 | 28 | 7,392 |
| 3) Current Meter | | 7 | 84 | 588 |
| 4) Steel Tape | 100 m | 1,985 | 4 | 7,940 |
| 5) Soil Auger | | 76 | 20 | 1,520 |
| Total (Item 3) | | | | 40,696 |
| Sub-Total (2) | | | | 1,098,175 |
| <hr/> | | | | |
| (III) Total (1) + (2) | | | | 1,158,620 |
| (IV) Price Contingencies | | | | 218,240 |
| (V) Ground Total | | | | 1,376,860 |

COMMUNAL IRRIGATION DEVELOPMENT TARGET: 1990 - 2000

New Development

| Year | CARP | NIA Regular Program | | | NIA/Total | CARP & NIA |
|--------------|----------------|---------------------|---------------|---------------|----------------|----------------|
| | | CIDIP | CIDP-I&II | Others | | |
| 1990 | 9,110 | 14,178 | 1,985 | 3,055 | 19,218 | 28,328 |
| 1991 | 14,219 | 30,482 | 736 | 8,360 | 39,578 | 53,797 |
| 1992 | 16,794 | 15,000 | 2,264 | 2,700 | 19,964 | 36,758 |
| 1993 | 17,914 | 15,000 | 3,600 | 1,650 | 20,250 | 38,164 |
| 1994 | 19,593 | 15,000 | 4,400 | 1,700 | 21,100 | 40,693 |
| 1995 | 22,392 | 15,000 | 1,000 | 1,445 | 17,445 | 39,837 |
| 1996 | 39,480 | 15,000 | 0 | 1,250 | 16,250 | 55,730 |
| 1997 | 39,479 | 15,000 | 0 | 6,250 | 21,250 | 60,729 |
| 1998 | 0 | 15,000 | 0 | 9,365 | 24,365 | 24,365 |
| 1990 | 0 | 15,000 | 0 | 7,550 | 22,550 | 22,550 |
| 2000 | 0 | 15,000 | 0 | 4,750 | 19,750 | 19,750 |
| Total | 178,981 | 179,660 | 13,985 | 48,075 | 241,720 | 420,701 |

Rehabilitation

| Year | CARP | NIA Regular Program | | | NIA/Total | CARP & NIA |
|--------------|---------------|---------------------|---------------|----------------|----------------|----------------|
| | | CIDIP | CIDP-I&II | Others | | |
| 1990 | 3,814 | 17,693 | 13,944 | 51,863 | 83,500 | 87,314 |
| 1991 | 4,795 | 17,976 | 3,800 | 18,426 | 40,202 | 44,997 |
| 1992 | 5,664 | 16,127 | 4,200 | 1,127 | 21,454 | 27,118 |
| 1993 | 6,041 | 12,591 | 4,200 | 4,209 | 21,000 | 27,041 |
| 1994 | 6,607 | 15,000 | 4,000 | 2,285 | 21,285 | 27,892 |
| 1995 | 7,551 | 15,000 | 0 | 5,350 | 20,350 | 27,901 |
| 1996 | 23,545 | 15,000 | 0 | 3,150 | 18,150 | 41,695 |
| 1997 | 23,544 | 15,000 | 0 | 7,400 | 22,400 | 45,944 |
| 1998 | 0 | 15,000 | 0 | 7,800 | 22,800 | 22,800 |
| 1990 | 0 | 15,000 | 0 | 6,600 | 21,600 | 21,600 |
| 2000 | 0 | 15,000 | 0 | 6,400 | 21,400 | 21,400 |
| Total | 81,561 | 169,387 | 30,144 | 114,610 | 314,141 | 395,702 |

Total

| Year | CARP | NIA Regular Program | | | NIA/Total | CARP & NIA |
|--------------|----------------|---------------------|---------------|----------------|----------------|----------------|
| | | CIDIP | CIDP-I&II | Others | | |
| 1990 | 12,924 | 31,871 | 15,929 | 54,918 | 102,718 | 115,642 |
| 1991 | 19,014 | 48,458 | 4,536 | 26,786 | 79,780 | 98,794 |
| 1992 | 22,458 | 31,127 | 6,464 | 3,827 | 41,418 | 63,876 |
| 1993 | 23,955 | 27,591 | 7,800 | 5,859 | 41,250 | 65,205 |
| 1994 | 26,200 | 30,000 | 8,400 | 3,985 | 42,385 | 68,585 |
| 1995 | 29,943 | 30,000 | 1,000 | 6,795 | 37,795 | 67,738 |
| 1996 | 63,025 | 30,000 | 0 | 4,400 | 34,400 | 97,425 |
| 1997 | 63,023 | 30,000 | 0 | 13,650 | 43,650 | 106,673 |
| 1998 | 0 | 30,000 | 0 | 17,165 | 47,165 | 47,165 |
| 1990 | 0 | 30,000 | 0 | 14,150 | 44,150 | 44,150 |
| 2000 | 0 | 30,000 | 0 | 11,150 | 41,150 | 41,150 |
| Total | 260,542 | 349,047 | 44,129 | 162,685 | 555,861 | 816,403 |

Source: NIA Corporate Plan

**PROPOSED FORMULA FOR ALLOCATION OF
NATIONAL DEVELOPMENT TARGET**

For CIPs (New Development)

$$PTAP = NTAP \times \left\{ UCAP \times \left(0.50 \times 1/UCAN + 0.30 \times CDRP / \sum(UCAP \times CDRP) \right) + 0.10 \times CARP / \sum(UCAP \times CARP) + 0.10 \text{ ILP} / \sum(UCAP \times \text{ILP}) \right\}$$

where,

| | |
|-------|--|
| PTAP: | Provincial target area for new development (CIPs) |
| NTAP: | National target area for new development (CIPs) |
| UCAP: | Unirrigated communal area in province UCAP = PIAP - CISP |
| | PIAP: Potential irrigable area for CIPs in province |
| | CISP: Communal irrigation system area in province |
| UCAN: | Unirrigated communal area in the country (nationwide) UCAN = PIAN - CISN |
| | PIAN: Potential irrigable area for CIPs in the country (nationwide) |
| | CISN: Communal irrigation system area in the country |
| CDRP: | Rate of unirrigated area over potential irrigable area in province (CIPs) CDRP = UCAP / PIAP (communal irrigation systems/projects) |
| CARP: | CARP Strategic Provinces: 1, Other Provinces: 0 |
| ILP: | Income Level in province: 1 - 6 according to the provincial income level |

For CISs (Rehabilitation and Improvement)

$$PTAS = NTAS \times \left\{ CISP \times \left(0.50 \times 1/CISN + 0.30 \times RPAP / \sum(CISP \times RPAP) + 0.10 \times CARP + 0.10 \text{ ILP} / \sum(CISP \times \text{ILP}) \right) \right\}$$

where,

| | |
|-------|--|
| PTAS: | Provincial target area for rehabilitation (CISs) |
| NTAS: | National target area for rehabilitation (CISs) |
| CISP: | Area under the existing communal irrigation systems in province |
| CISN: | Area under the existing communal irrigation systems in the country (total of CISP) |
| RPAP: | Repayment rate of amortization in province |
| CARP: | CARP Strategic Provinces: 1, Other Provinces: 0 |
| ILP: | Income Level in province: 1 - 6 according to the provincial income level |

Table 9-03

PROVINCIAL DEVELOPMENT TARGET AREA OF CIPs

| Region | Province | CIS Service Area (ha) | CIP Unirrigated Area (ha) | CARP SOP | Income Class | Province Ratio | SSIDP Target Area (ha) |
|-----------------------|------------------------|-----------------------|---------------------------|----------|--------------|----------------|------------------------|
| I | 1 ILOCOS NORTE | 29,189 | 17,557 | 0 | 2 | 0.02843 | 8,243 |
| | 2 ABRA | 11,762 | 7,233 | 0 | 4 | 0.01287 | 3,732 |
| | 3 ILOCOS SUR | 11,374 | 9,086 | 0 | 3 | 0.01609 | 4,666 |
| | 4 MOUNTAIN PROVINCE | 11,999 | 19,504 | 0 | 5 | 0.04128 | 11,971 |
| | 5 LA UNION | 6,669 | 3,916 | 0 | 3 | 0.00662 | 1,919 |
| | 6 BENGUET | 3,310 | 14,057 | 0 | 3 | 0.03051 | 8,847 |
| | 7 PANOSINAN | 58,856 | 1,630 | 1 | 1 | 0.00263 | 764 |
| | sub-total | 133,159 | 72,983 | | | | 40,142 |
| II | 8 BATANES | 0 | 0 | 0 | 0 | 0.00000 | 0 |
| | 9 CAGAYAN | 16,163 | 12,246 | 0 | 1 | 0.01962 | 5,691 |
| | 10 KALINGA APAYAO | 7,937 | 9,344 | 1 | 4 | 0.02250 | 6,525 |
| | 11 ISABELA | 10,833 | 15,515 | 1 | 1 | 0.03459 | 10,030 |
| | 12 IFUGAO | 5,315 | 14,130 | 1 | 5 | 0.03799 | 11,016 |
| | 13 NUEVA VISCAYA | 23,023 | 3,481 | 0 | 4 | 0.00524 | 1,521 |
| | 14 QUIRINO | 3,857 | 10,298 | 0 | 5 | 0.02302 | 6,674 |
| | sub-total | 67,128 | 65,014 | | | | 41,438 |
| III | 15 NUEVA ECUA | 16,787 | 6,485 | 1 | 1 | 0.01226 | 3,555 |
| | 16 TARLAC | 17,528 | 3,441 | 0 | 1 | 0.00451 | 1,308 |
| | 17 ZAMBALES | 8,754 | 4,103 | 0 | 3 | 0.00671 | 1,945 |
| | 18 PAMPANGA | 18,421 | 3,276 | 1 | 1 | 0.00574 | 1,663 |
| | 19 BULACAN | 4,867 | 840 | 0 | 1 | 0.00109 | 315 |
| | 20 BATAAN | 7,354 | 1,015 | 0 | 2 | 0.00136 | 395 |
| | sub-total | 73,711 | 19,160 | | | | 9,181 |
| | IV | 21 AURORA | 7,347 | 2,942 | 0 | 5 | 0.00516 |
| 22 QUEZON | | 6,250 | 2,308 | 1 | 1 | 0.00434 | 1,259 |
| 23 RIZAL | | 3,372 | 152 | 0 | 2 | 0.00019 | 55 |
| 24 CAVITE | | 347 | 1,735 | 0 | 2 | 0.00368 | 1,066 |
| 25 LAGUNA | | 7,173 | 380 | 0 | 1 | 0.00045 | 131 |
| 26 BATANGAS | | 2,413 | 3,014 | 1 | 1 | 0.00661 | 1,917 |
| 27 MARINDUQUE | | 782 | 456 | 0 | 4 | 0.00081 | 233 |
| 28 MINDORO ORIENTAL | | 11,923 | 4,357 | 0 | 2 | 0.00654 | 1,897 |
| 29 MINDORO OCCIDENTAL | | 18,208 | 7,486 | 1 | 4 | 0.01599 | 4,636 |
| 30 ROMBLON | | 1,908 | 747 | 0 | 5 | 0.00131 | 379 |
| 31 PALAWAN | | 10,885 | 23,153 | 0 | 2 | 0.04519 | 13,105 |
| sub-total | | 70,608 | 46,730 | | | | 26,173 |
| V | | 32 CAMARINES NORTE | 1,607 | 8,998 | 0 | 4 | 0.02060 |
| | 33 CAMARINES SUR | 24,445 | 11,158 | 1 | 1 | 0.02152 | 6,240 |
| | 34 CATANDUANES | 1,742 | 1,187 | 0 | 5 | 0.00223 | 648 |
| | 35 ALBAY | 15,312 | 19,846 | 0 | 2 | 0.03623 | 10,506 |
| | 36 SORSOGON | 7,870 | 4,286 | 1 | 3 | 0.00911 | 2,642 |
| | 37 MASBATE | 1,819 | 2,350 | 0 | 3 | 0.00447 | 1,296 |
| | sub-total | 52,795 | 47,825 | | | | 27,307 |
| | VI | 38 AKLAN | 2,474 | 510 | 0 | 4 | 0.00079 |
| 39 CAPIZ | | 2,082 | 2,586 | 0 | 3 | 0.00489 | 1,418 |
| 40 ANTIQUE | | 7,881 | 2,510 | 1 | 4 | 0.00522 | 1,515 |
| 41 ILOILO | | 5,196 | 2,183 | 0 | 1 | 0.00318 | 921 |
| 42 NEGROS OCCIDENTAL | | 2,041 | 12,341 | 1 | 1 | 0.03114 | 9,031 |
| 43 NEGROS DEL NORTE | | 0 | 0 | 0 | | 0.00000 | 0 |
| sub-total | 19,674 | 20,130 | | | | 13,114 | |
| VII | 44 CEBU | 3,140 | 2,583 | 0 | 1 | 0.00420 | 1,217 |
| | 45 NEGROS ORIENTAL | 5,497 | 6,540 | 1 | 2 | 0.01476 | 4,280 |
| | 46 BOHOL | 8,503 | 1,020 | 1 | 1 | 0.00174 | 504 |
| | 47 SIKHJOR | 0 | 1,100 | 0 | 6 | 0.00287 | 833 |
| | sub-total | 17,140 | 11,243 | | | | 6,833 |
| VIII | 48 NORTHERN SAMAR | 1,850 | 7,012 | 0 | 4 | 0.01562 | 4,529 |
| | 49 SAMAR | 1,274 | 5,727 | 1 | 3 | 0.01508 | 4,374 |
| | 50 EASTERN SAMAR | 542 | 5,221 | 0 | 4 | 0.01228 | 3,562 |
| | 51 NORTHERN LEYTE | 19,976 | 10,094 | 1 | 1 | 0.01971 | 5,716 |
| | 52 SOUTHERN LEYTE | 3,897 | 1,346 | 0 | 4 | 0.00221 | 641 |
| | sub-total | 27,539 | 29,400 | | | | 18,824 |
| IX | 53 ZAMBOANGA DEL NORTE | 4,787 | 3,335 | 0 | 3 | 0.00578 | 1,677 |
| | 54 ZAMBOANGA DEL SUR | 10,489 | 11,409 | 1 | 2 | 0.02547 | 7,386 |
| | 55 BASILAN | 160 | 205 | 0 | 5 | 0.00042 | 122 |
| | 56 SULU | 0 | 950 | 0 | 4 | 0.00129 | 375 |
| | 57 TAWI-TAWI | 0 | 710 | 0 | 6 | 0.00108 | 312 |
| | sub-total | 15,436 | 16,609 | | | | 9,873 |
| X | 58 SURIGAO DEL NORTE | 5,413 | 4,991 | 0 | 4 | 0.00942 | 2,731 |
| | 59 CAMIGUIN | 562 | 315 | 0 | 6 | 0.00060 | 174 |
| | 60 AGUSAN DEL NORTE | 10,506 | 4,245 | 0 | 5 | 0.00745 | 2,160 |
| | 61 MISAMIS ORIENTAL | 2,744 | 5,142 | 0 | 2 | 0.00988 | 2,865 |
| | 62 MISAMIS OCCIDENTAL | 6,146 | 2,884 | 0 | 5 | 0.00516 | 1,496 |
| | 63 BUKIDNON | 6,214 | 15,482 | 1 | 2 | 0.03782 | 10,967 |
| | 64 AGUSAN DEL SUR | 1,470 | 17,610 | 1 | 3 | 0.04840 | 14,037 |
| | sub-total | 33,055 | 50,669 | | | | 34,430 |
| XI | 65 SURIGAO DEL SUR | 3,148 | 3,130 | 0 | 3 | 0.00573 | 1,662 |
| | 66 DAVAO ORIENTAL | 2,005 | 1,670 | 0 | 3 | 0.00298 | 863 |
| | 67 DAVAO DEL NORTE | 8,991 | 4,080 | 1 | 1 | 0.00786 | 2,280 |
| | 68 DAVAO DEL SUR | 9,626 | 3,940 | 0 | 2 | 0.00601 | 1,744 |
| | 69 SOUTH COTABATO | 6,709 | 9,752 | 1 | 1 | 0.02178 | 6,316 |
| | sub-total | 30,479 | 22,572 | | | | 12,864 |
| XII | 70 LANA DEL NORTE | 3,437 | 6,566 | 0 | 4 | 0.01366 | 3,961 |
| | 71 LANA DEL SUR | 1,205 | 13,347 | 0 | 4 | 0.03157 | 9,154 |
| | 72 NORTH COTABATO | 5,126 | 30,520 | 1 | 2 | 0.07931 | 22,999 |
| | 73 MAGUINDANAO | 9,427 | 14,365 | 1 | 4 | 0.03558 | 10,319 |
| | 74 SULTAN KUDARAT | 20,131 | 7,055 | 0 | 4 | 0.01162 | 3,369 |
| | sub-total | 39,326 | 71,853 | | | | 49,801 |
| Total | | 580,050 | 474,188 | | | 1.00000 | 290,000 |

Table 9-04

PROVINCIAL DEVELOPMENT TARGET AREA OF CISS

| Region | Province | CIS Service Area (ha) | Amortization Repayment Rate (%) | CARP SOP | Income Class | Province Ratio | SSIDP Target Area (ha) |
|--------|------------------------|-----------------------|---------------------------------|----------|--------------|----------------|------------------------|
| I | 1 ILOCOS NORTE | 29,189 | 9.11 | 0 | 2 | 0.05312 | 14,875 |
| | 2 ABRA | 11,762 | 1.04 | 0 | 4 | 0.01467 | 4,108 |
| | 3 ILOCOS SUR | 11,374 | 2.64 | 0 | 3 | 0.01498 | 4,193 |
| | 4 MOUNTAIN PROVINCE | 11,999 | 5.44 | 0 | 5 | 0.02055 | 5,754 |
| | 5 LA UNION | 6,669 | 2.11 | 0 | 3 | 0.00847 | 2,371 |
| | 6 BENGUET | 3,310 | 3.12 | 0 | 3 | 0.00450 | 1,260 |
| | 7 PANGASINAN | 58,856 | 7.98 | 1 | 1 | 0.11863 | 33,218 |
| | sub-total | 133,159 | | | | | 65,779 |
| II | 8 BATANES | 0 | 0.00 | 0 | 0 | 0.00000 | 0 |
| | 9 CAGAYAN | 16,163 | 7.22 | 0 | 1 | 0.02552 | 7,145 |
| | 10 KALINGA APAYAO | 7,937 | 3.10 | 1 | 4 | 0.01429 | 4,001 |
| | 11 ISABELA | 10,833 | 4.32 | 1 | 1 | 0.01830 | 5,123 |
| | 12 IFUGAO | 5,315 | 3.06 | 1 | 5 | 0.00994 | 2,783 |
| | 13 NURVA VISCAAYA | 23,023 | 13.17 | 0 | 4 | 0.05361 | 15,011 |
| | 14 QUIRINO | 3,857 | 3.41 | 0 | 5 | 0.00591 | 1,655 |
| | sub-total | 67,128 | | | | | 35,718 |
| III | 15 NUEVA ECUIA | 16,787 | 14.49 | 1 | 1 | 0.04357 | 12,200 |
| | 16 TARLAC | 17,528 | 2.63 | 0 | 1 | 0.02050 | 5,741 |
| | 17 ZAMBALES | 8,754 | 2.57 | 0 | 3 | 0.01147 | 3,212 |
| | 18 PAMPANGA | 18,421 | 6.45 | 1 | 1 | 0.03461 | 9,691 |
| | 19 BULACAN | 4,867 | 2.64 | 0 | 1 | 0.00570 | 1,595 |
| | 20 BATAAN | 7,354 | 10.21 | 0 | 2 | 0.01410 | 3,949 |
| | | sub-total | 73,711 | | | | |
| IV | 21 AURORA | 7,347 | 0.45 | 0 | 5 | 0.00932 | 2,609 |
| | 22 QUEZON | 6,250 | 4.49 | 1 | 1 | 0.01065 | 2,982 |
| | 23 RIZAL | 3,372 | 4.29 | 0 | 2 | 0.00469 | 1,313 |
| | 24 CAVITE | 347 | 2.02 | 0 | 2 | 0.00041 | 115 |
| | 25 LAGUNA | 7,173 | 12.61 | 0 | 1 | 0.01477 | 4,136 |
| | 26 BATANGAS | 2,413 | 1.63 | 1 | 1 | 0.00350 | 980 |
| | 27 MARINDUQUE | 782 | 4.38 | 0 | 4 | 0.00121 | 338 |
| | 28 MINDORO ORIENTAL | 11,923 | 5.00 | 0 | 2 | 0.01734 | 4,855 |
| | 29 MINDORO OCCIDENTAL | 18,208 | 6.43 | 1 | 4 | 0.03819 | 10,693 |
| | 30 ROMBLON | 1,908 | 4.29 | 0 | 5 | 0.00307 | 860 |
| | 31 PALAWAN | 10,885 | 0.93 | 0 | 2 | 0.01188 | 3,325 |
| | sub-total | 70,608 | | | | | 32,206 |
| V | 32 CAMARINES NORTE | 1,607 | 4.08 | 0 | 4 | 0.00244 | 683 |
| | 33 CAMARINES SUR | 24,445 | 4.82 | 1 | 1 | 0.04239 | 11,870 |
| | 34 CATANDUANES | 1,742 | 0.20 | 0 | 5 | 0.00217 | 608 |
| | 35 ALBAY | 15,312 | 2.30 | 0 | 2 | 0.01858 | 5,204 |
| | 36 SORSOGON | 7,870 | 3.83 | 1 | 3 | 0.01411 | 3,949 |
| | 37 MASBATE | 1,819 | 10.14 | 0 | 3 | 0.00361 | 1,011 |
| | | sub-total | 52,795 | | | | |
| VI | 38 AKLAN | 2,474 | 6.56 | 0 | 4 | 0.00430 | 1,205 |
| | 39 CAPEZ | 2,082 | 2.83 | 0 | 3 | 0.00278 | 778 |
| | 40 ANTIQUE | 7,881 | 9.53 | 1 | 4 | 0.01870 | 5,236 |
| | 41 ILOILO | 5,195 | 2.54 | 0 | 1 | 0.00604 | 1,690 |
| | 42 NEGROS OCCIDENTAL | 2,041 | 3.99 | 1 | 1 | 0.00339 | 948 |
| | 43 NEGROS DEL NORTE | 0 | 0.00 | 0 | 0 | 0.00000 | 0 |
| | sub-total | 19,674 | | | | | 9,857 |
| VII | 44 CEBU | 3,140 | 2.40 | 0 | 1 | 0.00361 | 1,010 |
| | 45 NEGROS ORIENTAL | 5,497 | 3.44 | 1 | 2 | 0.00926 | 2,591 |
| | 46 BOHOL | 8,503 | 4.55 | 1 | 1 | 0.01453 | 4,070 |
| | 47 SIKUIJOR | 0 | 4.55 | 0 | 6 | 0.00000 | 0 |
| | sub-total | 17,140 | | | | | 7,671 |
| VIII | 48 NORTHERN SAMAR | 1,850 | 0.57 | 0 | 4 | 0.00223 | 625 |
| | 49 SAMAR | 1,274 | 0.50 | 1 | 3 | 0.00191 | 534 |
| | 50 EASTERN SAMAR | 542 | 0.00 | 0 | 4 | 0.00063 | 175 |
| | 51 NORTHERN LEYTE | 19,976 | 2.46 | 1 | 1 | 0.03043 | 8,520 |
| | 52 SOUTHERN LEYTE | 3,897 | 2.57 | 0 | 4 | 0.00540 | 1,511 |
| | sub-total | 27,539 | | | | | 11,365 |
| IX | 53 ZAMBOANGA DEL NORTE | 4,787 | 2.06 | 0 | 3 | 0.00606 | 1,696 |
| | 54 ZAMBOANGA DEL SUR | 10,489 | 5.57 | 1 | 2 | 0.01965 | 5,503 |
| | 55 BASILAN | 160 | 5.57 | 0 | 5 | 0.00028 | 77 |
| | 56 SULU | 0 | 0.00 | 0 | 4 | 0.00000 | 0 |
| | 57 TAWI-TAWI | 0 | 0.00 | 0 | 6 | 0.00000 | 0 |
| | | sub-total | 15,436 | | | | |
| X | 58 SURIGAO DEL NORTE | 5,413 | 6.09 | 0 | 4 | 0.00919 | 2,573 |
| | 59 CAMIGUIN | 562 | 1.47 | 0 | 6 | 0.00080 | 225 |
| | 60 AGUSAN DEL NORTE | 10,506 | 2.53 | 0 | 5 | 0.01527 | 4,276 |
| | 61 MISAMIS ORIENTAL | 2,744 | 1.87 | 0 | 2 | 0.00322 | 903 |
| | 62 MISAMIS OCCIDENTAL | 6,146 | 6.51 | 0 | 5 | 0.01111 | 3,112 |
| | 63 BUKIDNON | 6,214 | 5.14 | 1 | 2 | 0.01141 | 3,194 |
| | 64 AGUSAN DEL SUR | 1,470 | 9.12 | 1 | 3 | 0.00333 | 931 |
| | sub-total | 33,055 | | | | | 15,214 |
| XI | 65 SURIGAO DEL SUR | 3,148 | 2.49 | 0 | 3 | 0.00410 | 1,149 |
| | 66 DAVAO ORIENTAL | 2,005 | 4.21 | 0 | 3 | 0.00292 | 818 |
| | 67 DAVAO DEL NORTE | 8,991 | 7.86 | 1 | 1 | 0.01802 | 5,047 |
| | 68 DAVAO DEL SUR | 9,626 | 9.88 | 0 | 2 | 0.01818 | 5,091 |
| | 69 SOUTH COTABATO | 6,709 | 5.53 | 1 | 1 | 0.01205 | 3,375 |
| | sub-total | 30,479 | | | | | 15,480 |
| XII | 70 LANA O DEL NORTE | 3,437 | 10.62 | 0 | 4 | 0.00722 | 2,022 |
| | 71 LANA O DEL SUR | 1,205 | 3.37 | 0 | 4 | 0.00175 | 491 |
| | 72 NORTH COTABATO | 5,126 | 9.29 | 1 | 2 | 0.01131 | 3,166 |
| | 73 MAGUINDANAO | 9,427 | 8.28 | 1 | 4 | 0.02132 | 5,971 |
| | 74 SULTAN KUDARAT | 20,131 | 3.11 | 0 | 4 | 0.02883 | 8,071 |
| | sub-total | 39,326 | | | | | 19,721 |
| | Total | 580,050 | | | | 1.00000 | 280,000 |

Table 9-05

PROVISIONAL DEVELOPMENT TARGET AREA OF SSIDP : CIPs

| Region | Province | CIP Potential Area 1 | SSIDP Target Area 2 | Area Identified by SSIDP | | | Total 6=3+4+5 | BALANCE 7=2-6 |
|-------------------|------------------------|----------------------------|---------------------------|--------------------------|--------------|--------------|------------------|------------------|
| | | | | Group-A 3 | Group-B 4 | Group-C 5 | | |
| | | | | | | | | |
| I | 1 ILOCOS NORTE | 17,557 | 8,243 | 0 | 0 | 0 | 0 | 8,243 |
| | 2 ABRA | 7,233 | 3,732 | 0 | 350 | 1,456 | 1,806 | 1,926 |
| | 3 ILOCOS SUR | 9,085 | 4,666 | 801 | 290 | 3,990 | 5,081 | -415 |
| | 4 MOUNTAIN PROVINCE | 19,504 | 11,971 | 595 | 0 | 6,525 | 7,120 | 4,851 |
| | 5 LA UNION | 3,916 | 1,919 | 0 | 280 | 2,433 | 2,713 | -794 |
| | 6 BENGUET | 14,057 | 8,847 | 167 | 283 | 2,403 | 2,853 | 5,994 |
| | 7 PANGASINAN | 1,630 | 764 | 55 | 0 | 175 | 230 | 534 |
| | Sub-total | 72,983 | 40,142 | 1,618 | 1,203 | 16,982 | 19,803 | 20,339 |
| II | 8 BATANES | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 CAGAYAN | 12,246 | 5,691 | 0 | 392 | 9,070 | 9,462 | -3,771 |
| | 10 KALINGA APAYAO | 9,344 | 6,525 | 456 | 250 | 4,856 | 5,562 | 963 |
| | 11 ISABELA | 15,515 | 10,030 | 0 | 180 | 6,640 | 6,820 | 3,210 |
| | 12 IFUGAO | 14,130 | 11,016 | 275 | 250 | 4,455 | 4,980 | 6,036 |
| | 13 NUEVA VISCAAYA | 3,481 | 1,521 | 0 | 0 | 1,980 | 1,980 | -459 |
| | 14 QUIRINO | 10,298 | 6,674 | 0 | 125 | 4,445 | 4,570 | 2,104 |
| | sub-total | 65,014 | 41,457 | 731 | 1,197 | 31,446 | 33,374 | 8,083 |
| III | 15 NUEVA ECJA | 6,485 | 3,555 | 0 | 0 | 153 | 153 | 3,402 |
| | 16 TARLAC | 3,441 | 1,308 | 0 | 0 | 514 | 514 | 794 |
| | 17 ZAMBALES | 4,103 | 1,945 | 0 | 0 | 0 | 0 | 1,945 |
| | 18 PAMPANGA | 3,276 | 1,663 | 0 | 0 | 3,050 | 3,050 | -1,387 |
| | 19 BULACAN | 840 | 315 | 0 | 0 | 420 | 420 | -105 |
| | 20 BATAAN | 1,015 | 395 | 0 | 0 | 0 | 0 | 395 |
| | | sub-total | 19,160 | 9,181 | 0 | 0 | 4,137 | 4,137 |
| IV | 21 AURORA | 2,942 | 1,495 | 200 | 0 | 1,221 | 1,421 | 74 |
| | 22 QUEZON | 2,308 | 1,259 | 347 | 84 | 945 | 1,376 | -117 |
| | 23 RIZAL | 152 | 55 | 0 | 0 | 75 | 75 | -20 |
| | 24 CAVITE | 1,735 | 1,066 | 222 | 60 | 285 | 567 | 499 |
| | 25 LAGUNA | 380 | 131 | 0 | 0 | 170 | 170 | -39 |
| | 26 BATANGAS | 3,014 | 1,917 | 0 | 0 | 2,017 | 2,017 | -100 |
| | 27 MARINDUQUE | 456 | 233 | 0 | 0 | 0 | 0 | 233 |
| | 28 MINDORO ORIENTAL | 4,357 | 1,897 | 85 | 0 | 2,357 | 2,442 | -545 |
| | 29 MINDORO OCCIDENTAL | 7,486 | 4,636 | 0 | 0 | 2,668 | 2,668 | 1,968 |
| | 30 ROMBLON | 747 | 379 | 70 | 0 | 50 | 120 | 259 |
| | 31 PALAWAN | 23,153 | 13,105 | 1,080 | 1,365 | 13,773 | 16,218 | -3,113 |
| | sub-total | 46,730 | 26,173 | 2,004 | 1,509 | 23,561 | 27,074 | -901 |
| V | 32 CAMARINES NORTE | 8,998 | 5,975 | 580 | 235 | 5,871 | 6,686 | -711 |
| | 33 CAMARINES SUR | 11,158 | 6,240 | 1,033 | 293 | 3,219 | 4,545 | 1,695 |
| | 34 CATANDUANES | 1,187 | 648 | 0 | 0 | 90 | 90 | 558 |
| | 35 ALBAY | 19,846 | 10,506 | 380 | 0 | 7,058 | 7,438 | 3,068 |
| | 36 SORSOGON | 4,286 | 2,642 | 216 | 236 | 272 | 724 | 1,918 |
| | 37 MASBATE | 2,350 | 1,296 | 0 | 376 | 755 | 1,131 | 165 |
| | | sub-total | 47,825 | 27,307 | 2,209 | 1,140 | 17,265 | 20,614 |
| VI | 38 AKLAN | 510 | 229 | 100 | 100 | 0 | 200 | 29 |
| | 39 CAPIZ | 2,586 | 1,418 | 0 | 0 | 845 | 845 | 573 |
| | 40 ANTIQUE | 2,510 | 1,515 | 590 | 100 | 1,006 | 1,696 | -181 |
| | 41 ILOILO | 2,183 | 921 | 64 | 0 | 700 | 764 | 157 |
| | 42 NEGROS OCCIDENTAL | 12,341 | 9,031 | 1,110 | 70 | 3,410 | 4,590 | 4,441 |
| | 43 NEGROS DEL NORTE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | sub-total | 20,130 | 13,114 | 1,864 | 270 | 5,951 | 8,095 |
| VII | 44 CEBU | 2,583 | 1,217 | 200 | 0 | 530 | 730 | 487 |
| | 45 NEGROS ORIENTAL | 6,540 | 4,280 | 2,260 | 200 | 180 | 2,640 | 1,640 |
| | 46 BOHOL | 1,020 | 504 | 0 | 0 | 0 | 0 | 504 |
| | 47 SIQUOR | 1,100 | 833 | 200 | 150 | 260 | 610 | 223 |
| | sub-total | 11,243 | 6,834 | 2,660 | 350 | 970 | 3,980 | 2,854 |
| VIII | 48 NORTHERN SAMAR | 7,012 | 4,529 | 345 | 50 | 4,065 | 4,460 | 69 |
| | 49 SAMAR | 5,727 | 4,374 | 465 | 0 | 2,498 | 2,963 | 1,411 |
| | 50 EASTERN SAMAR | 5,221 | 3,562 | 145 | 50 | 862 | 1,057 | 2,505 |
| | 51 NORTHERN LEYTE | 10,094 | 5,716 | 540 | 0 | 5,820 | 6,360 | -644 |
| | 52 SOUTHERN LEYTE | 1,346 | 641 | 208 | 0 | 110 | 348 | 293 |
| | sub-total | 29,400 | 18,822 | 1,703 | 100 | 13,385 | 15,188 | 3,634 |
| IX | 53 ZAMBOANGA DEL NORTE | 3,355 | 1,677 | 290 | 185 | 1,460 | 1,935 | -258 |
| | 54 ZAMBOANGA DEL SUR | 11,409 | 7,386 | 0 | 0 | 2,274 | 2,274 | 5,112 |
| | 55 BASILAN | 205 | 122 | 0 | 0 | 0 | 0 | 122 |
| | 56 SULU | 950 | 375 | 0 | 0 | 950 | 950 | -575 |
| | 57 TAWI-TAWI | 710 | 312 | 0 | 0 | 710 | 710 | -398 |
| | | sub-total | 16,609 | 9,872 | 290 | 185 | 5,394 | 5,869 |
| X | 58 SURIGAO DEL NORTE | 4,991 | 2,731 | 320 | 0 | 1,329 | 1,649 | 1,082 |
| | 59 CAMIGUIN | 315 | 174 | 0 | 0 | 0 | 0 | 174 |
| | 60 AGUSAN DEL NORTE | 4,245 | 2,160 | 602 | 100 | 2,055 | 2,757 | -597 |
| | 61 MISAMIS ORIENTAL | 5,142 | 2,865 | 250 | 145 | 755 | 1,150 | 1,715 |
| | 62 MISAMIS OCCIDENTAL | 2,884 | 1,496 | 0 | 0 | 729 | 729 | 767 |
| | 63 BUKIDNON | 15,482 | 10,967 | 1,750 | 140 | 6,380 | 8,270 | 2,697 |
| | 64 AGUSAN DEL SUR | 17,610 | 14,037 | 1,020 | 700 | 4,675 | 6,395 | 7,642 |
| | sub-total | 50,669 | 34,430 | 3,942 | 1,085 | 15,923 | 20,950 | 13,480 |
| XI | 65 SURIGAO DEL SUR | 3,130 | 1,662 | 0 | 670 | 2,460 | 3,130 | -1,468 |
| | 66 DAVAO ORIENTAL | 1,670 | 863 | 150 | 50 | 840 | 1,040 | -177 |
| | 67 DAVAO DEL NORTE | 4,080 | 2,280 | 830 | 0 | 996 | 1,826 | 454 |
| | 68 DAVAO DEL SUR | 3,940 | 1,744 | 390 | 0 | 910 | 1,300 | 444 |
| | 69 SOUTH COTABATO | 9,752 | 6,316 | 480 | 60 | 4,546 | 5,086 | 1,230 |
| | | sub-total | 22,572 | 12,865 | 1,850 | 780 | 9,752 | 12,382 |
| XII | 70 LANA DEL NORTE | 6,566 | 3,961 | 455 | 100 | 1,690 | 2,245 | 1,716 |
| | 71 LANA DEL SUR | 13,347 | 9,154 | 444 | 0 | 5,203 | 5,647 | 3,507 |
| | 72 NORTH COTABATO | 30,520 | 23,000 | 0 | 0 | 18,299 | 18,299 | 4,701 |
| | 73 MAGUINDANAO | 14,365 | 10,319 | 607 | 80 | 9,887 | 10,574 | -255 |
| 74 SULTAN KUDARAT | 7,055 | 3,369 | 1,430 | 0 | 2,040 | 3,470 | -101 | |
| | sub-total | 71,853 | 49,803 | 2,936 | 180 | 37,119 | 40,235 | 9,568 |
| | Total | 474,188 | 290,000 | 21,807 | 7,999 | 181,895 | 211,701 | 78,299 |

PROVINCIAL DEVELOPMENT TARGET AREA OF SSIDP : CISs

Table 9-06

| Region | Province | Service Area | SSIDP Target Area | Area for SSIDP | | | | | Excluded Area for Master Plan | Total | Balance | |
|-----------------------|------------------------|--------------|-------------------|----------------------------|---------|---------|---------|---------|-------------------------------|--------|---------|-------|
| | | | | Area for Master Plan Study | | | Total | 8=6+7 | | | | 9=2-6 |
| | | | | Group-A | Group-B | Group-C | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6=3+4+5 | 7 | 8=6+7 | 9=2-6 | | | | |
| I | 1 ILOCOS NORTH | 29,189 | 14,875 | 337 | 5,324 | 4,117 | 9,778 | 3,852 | 13,630 | 5,097 | | |
| | 2 ABRA | 11,762 | 4,168 | 763 | 325 | 3,153 | 4,241 | 1,025 | 5,266 | -133 | | |
| | 3 ILOCOS SUR | 11,374 | 4,193 | 337 | 204 | 6,032 | 6,573 | 1,610 | 8,183 | -2,380 | | |
| | 4 MOUNTAIN PROVINCE | 11,999 | 5,754 | 632 | 118 | 0 | 750 | 164 | 914 | 5,004 | | |
| | 5 LA UNION | 6,669 | 2,371 | 2,085 | 1,263 | 0 | 3,348 | 1,723 | 5,071 | -977 | | |
| | 6 BENGUET | 3,310 | 1,260 | 82 | 308 | 59 | 449 | 168 | 617 | 811 | | |
| | 7 PANGASINAN | 58,856 | 33,218 | 214 | 0 | 20,358 | 20,572 | 6,837 | 27,409 | 12,646 | | |
| | sub-total | 133,159 | 65,779 | 4,450 | 7,542 | 33,719 | 45,711 | 15,379 | 61,090 | 20,068 | | |
| II | 8 BATANES | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 9 CAGAYAN | 16,163 | 7,145 | 1,129 | 5,792 | 785 | 7,706 | 6,805 | 14,511 | -561 | | |
| | 10 KALINGA APAYAO | 7,937 | 4,001 | 0 | 0 | 1,198 | 1,198 | 4,104 | 5,602 | 2,803 | | |
| | 11 ISABELA | 10,833 | 5,123 | 160 | 0 | 2,590 | 2,750 | 7,025 | 9,775 | 2,373 | | |
| | 12 IFUGAO | 5,315 | 2,783 | 595 | 1,564 | 350 | 2,509 | 770 | 3,279 | 274 | | |
| | 13 NUEVA VISCAYA | 23,023 | 15,011 | 1,538 | 3,870 | 60 | 5,468 | 12,650 | 18,118 | 9,543 | | |
| | 14 QUIRINO | 3,857 | 1,655 | 480 | 1,800 | 100 | 2,380 | 1,080 | 3,460 | -725 | | |
| | sub-total | 67,128 | 35,718 | 3,902 | 13,026 | 5,083 | 22,011 | 32,734 | 54,745 | 13,707 | | |
| III | 15 NUEVA ECUA | 16,787 | 12,200 | 363 | 660 | 586 | 1,609 | 6,137 | 7,746 | 10,591 | | |
| | 16 TARLAC | 17,528 | 5,741 | 1,340 | 1,562 | 3,959 | 6,861 | 1,114 | 7,975 | -1,120 | | |
| | 17 ZAMBALES | 8,754 | 3,212 | 0 | 0 | 659 | 659 | 904 | 1,563 | 2,553 | | |
| | 18 PAMPANGA | 18,421 | 9,691 | 0 | 0 | 2,240 | 2,240 | 9,281 | 11,521 | 7,451 | | |
| | 19 BULACAN | 4,867 | 1,595 | 0 | 0 | 350 | 350 | 2,218 | 2,568 | 1,245 | | |
| | 20 BATAAN | 7,354 | 3,949 | 0 | 0 | 895 | 895 | 3,037 | 3,932 | 3,054 | | |
| | | sub-total | 73,711 | 36,388 | 1,703 | 2,222 | 8,689 | 12,614 | 22,691 | 35,305 | 23,774 | |
| IV | 21 AURORA | 7,347 | 2,609 | 1,091 | 1,370 | 545 | 3,184 | 3,006 | 6,190 | -397 | | |
| | 22 QUEZON | 6,250 | 2,982 | 121 | 227 | 319 | 667 | 3,208 | 3,875 | 2,315 | | |
| | 23 RIZAL | 3,372 | 1,313 | 0 | 53 | 1,597 | 1,650 | 1,119 | 1,769 | -337 | | |
| | 24 CAVITE | 347 | 115 | 0 | 0 | 158 | 158 | 438 | 596 | -43 | | |
| | 25 LAGUNA | 7,173 | 4,136 | 0 | 0 | 1,603 | 1,603 | 871 | 2,474 | 2,533 | | |
| | 26 BATANGAS | 2,413 | 989 | 0 | 0 | 0 | 0 | 2,032 | 2,032 | 980 | | |
| | 27 MARINDUQUE | 782 | 338 | 190 | 180 | 0 | 370 | 175 | 545 | -32 | | |
| 28 MINDORO ORIENTAL | 11,923 | 4,855 | 909 | 2,080 | 4,231 | 7,220 | 1,070 | 8,290 | -2,365 | | | |
| 29 MINDORO OCCIDENTAL | 18,208 | 10,693 | 0 | 0 | 2,121 | 2,121 | 8,207 | 10,328 | 8,572 | | | |
| 30 ROMBLON | 1,908 | 860 | 70 | 75 | 0 | 145 | 0 | 145 | 715 | | | |
| 31 PALAWAN | 10,885 | 3,325 | 600 | 1,035 | 1,822 | 3,457 | 3,765 | 7,222 | -132 | | | |
| | sub-total | 70,608 | 32,206 | 2,981 | 5,020 | 12,396 | 20,397 | 23,069 | 43,466 | 11,809 | | |
| V | 32 CAMARINES NORTE | 1,607 | 683 | 635 | 343 | 75 | 1,051 | 418 | 1,469 | -368 | | |
| | 33 CAMARINES SUR | 24,445 | 11,870 | 2,328 | 324 | 4,087 | 6,739 | 6,273 | 13,012 | 5,131 | | |
| | 34 CATANDUANES | 1,742 | 608 | 200 | 0 | 676 | 876 | 173 | 1,049 | -268 | | |
| | 35 ALBAY | 15,312 | 5,204 | 0 | 125 | 4,798 | 4,923 | 6,912 | 11,835 | 281 | | |
| | 36 SORSOGON | 7,870 | 3,949 | 892 | 2,802 | 0 | 3,694 | 710 | 4,404 | 255 | | |
| | 37 MASBATE | 1,819 | 1,011 | 419 | 0 | 312 | 731 | 1,123 | 1,854 | 280 | | |
| | | sub-total | 52,795 | 23,325 | 4,472 | 3,594 | 9,948 | 18,014 | 15,609 | 33,623 | 5,311 | |
| VI | 38 AKLAN | 2,474 | 1,205 | 726 | 855 | 0 | 1,581 | 224 | 1,805 | -376 | | |
| | 39 CAPEZ | 2,082 | 778 | 0 | 0 | 1,048 | 1,048 | 60 | 1,108 | -270 | | |
| | 40 ANTIQUE | 7,881 | 5,236 | 2,137 | 1,706 | 756 | 4,599 | 50 | 4,649 | 637 | | |
| | 41 ILOILO | 5,196 | 1,690 | 722 | 1,617 | 500 | 2,839 | 2,030 | 4,869 | -1,149 | | |
| | 42 NEGROS OCCIDENTAL | 2,041 | 948 | 0 | 185 | 0 | 185 | 2,141 | 2,326 | 763 | | |
| | 43 NEGROS DEL NORTE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | sub-total | 19,674 | 9,857 | 3,585 | 4,363 | 2,304 | 10,252 | 4,505 | 14,757 | -395 | |
| VII | 44 CEBU | 3,140 | 1,010 | 811 | 0 | 181 | 992 | 853 | 1,855 | 18 | | |
| | 45 NEGROS ORIENTAL | 5,497 | 2,591 | 1,935 | 330 | 1,030 | 3,295 | 1,590 | 4,885 | -704 | | |
| | 46 BOHOL | 8,503 | 4,070 | 942 | 1,260 | 1,642 | 3,844 | 813 | 4,657 | 226 | | |
| | 47 SIQUOR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | sub-total | 17,140 | 7,671 | 3,688 | 1,590 | 2,853 | 8,131 | 3,266 | 11,397 | -460 | |
| VIII | 48 NORTHERN SAMAR | 1,850 | 625 | 0 | 235 | 675 | 910 | 345 | 1,255 | -285 | | |
| | 49 SAMAR | 1,274 | 534 | 1,049 | 0 | 0 | 1,049 | 50 | 1,099 | -515 | | |
| | 50 EASTERN SAMAR | 542 | 175 | 0 | 167 | 0 | 167 | 85 | 252 | 8 | | |
| | 51 NORTHERN LEYTE | 19,976 | 8,520 | 7,769 | 5,940 | 764 | 14,473 | 1,751 | 16,224 | -5,953 | | |
| | 52 SOUTHERN LEYTE | 3,897 | 1,511 | 1,046 | 571 | 0 | 1,617 | 614 | 2,231 | -106 | | |
| | | sub-total | 27,539 | 11,365 | 9,864 | 6,913 | 1,439 | 18,216 | 2,845 | 21,061 | -6,851 | |
| IX | 53 ZAMBOANGA DEL NORTE | 4,787 | 1,696 | 1,698 | 270 | 0 | 1,968 | 255 | 2,223 | -272 | | |
| | 54 ZAMBOANGA DEL SUR | 10,489 | 5,503 | 350 | 0 | 2,827 | 3,177 | 4,690 | 7,867 | 2,326 | | |
| | 55 BASILAN | 160 | 77 | 0 | 0 | 80 | 80 | 75 | 155 | -3 | | |
| | 56 SULU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 57 TAWI-TAWI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | sub-total | 15,436 | 7,276 | 2,048 | 270 | 2,907 | 5,225 | 5,020 | 10,245 | 2,051 | | |
| X | 58 SURIGAO DEL NORTE | 5,413 | 2,573 | 122 | 398 | 0 | 520 | 1,890 | 2,410 | 2,053 | | |
| | 59 CAMIGUIN | 562 | 225 | 90 | 450 | 0 | 540 | 0 | 540 | -315 | | |
| | 60 AGUSAN DEL NORTE | 10,506 | 4,276 | 1,420 | 2,097 | 1,180 | 4,697 | 1,310 | 6,007 | -421 | | |
| | 61 MISAMIS ORIENTAL | 2,744 | 903 | 200 | 320 | 1,205 | 1,725 | 765 | 2,490 | -822 | | |
| | 62 MISAMIS OCCIDENTAL | 6,146 | 3,112 | 1,487 | 936 | 131 | 2,554 | 156 | 2,710 | 558 | | |
| | 63 BUKIDNON | 6,214 | 3,194 | 1,070 | 2,060 | 887 | 4,017 | 1,200 | 5,217 | -823 | | |
| | 64 AGUSAN DEL SUR | 1,470 | 931 | 875 | 600 | 500 | 1,975 | 1,050 | 3,025 | -1,044 | | |
| | sub-total | 33,055 | 15,214 | 5,264 | 6,861 | 3,903 | 16,028 | 6,371 | 22,399 | -814 | | |
| XI | 65 SURIGAO DEL SUR | 3,148 | 1,149 | 1,024 | 2,595 | 0 | 3,619 | 0 | 3,619 | -2,470 | | |
| | 66 DAVAO ORIENTAL | 2,005 | 818 | 0 | 490 | 870 | 1,360 | 380 | 1,740 | -542 | | |
| | 67 DAVAO DEL NORTE | 8,991 | 5,047 | 0 | 620 | 0 | 620 | 2,640 | 3,260 | 4,427 | | |
| | 68 DAVAO DEL SUR | 9,626 | 5,091 | 466 | 250 | 1,280 | 1,996 | 3,730 | 5,726 | 3,095 | | |
| | 69 SOUTH COTABATO | 6,709 | 3,375 | 2,982 | 798 | 325 | 4,105 | 1,830 | 5,935 | -730 | | |
| | | sub-total | 30,479 | 15,489 | 4,472 | 4,753 | 2,475 | 11,700 | 8,580 | 20,280 | 3,780 | |
| XII | 70 LANAO DEL NORTE | 3,437 | 2,022 | 300 | 0 | 1,166 | 1,466 | 1,792 | 3,258 | 556 | | |
| | 71 LANAO DEL SUR | 1,205 | 491 | 0 | 250 | 480 | 730 | 1,460 | 2,190 | -239 | | |
| | 72 NORTH COTABATO | 5,126 | 3,166 | 400 | 1,907 | 1,340 | 3,647 | 1,250 | 4,897 | -481 | | |
| | 73 MAGUINDANAO | 9,427 | 5,971 | 630 | 2,845 | 410 | 3,885 | 4,370 | 8,255 | 2,086 | | |
| | 74 SULTAN KUDARAT | 20,131 | 8,071 | 1,265 | 1,670 | 622 | 3,557 | 1,321 | 4,878 | 4,514 | | |
| | sub-total | 39,326 | 19,721 | 2,595 | 6,672 | 4,018 | 13,285 | 10,193 | 23,478 | 6,436 | | |
| | Total | 580,050 | 280,000 | 49,024 | 62,826 | 89,734 | 201,584 | 150,262 | 351,846 | 78,416 | | |

DEVELOPMENT TARGET AND ACTUAL ACCOMPLISHMENT

(1) NIA's DEVELOPMENT TARGET FOR 1990-2000

| | New Development | Rehabilitation | Total |
|--|--------------------|--------------------|--------------------|
| (1) <u>NIA Regular Program</u> (x 1,000 ha) | | | |
| NIS/NIP | 289.2 (18%) | 788.9 (48%) | 1,078.1 (66%) |
| CIS/CIP | <u>241.7 (15%)</u> | <u>314.1 (19%)</u> | <u>555.8 (34%)</u> |
| Total | 530.9 (33%) | 1,103.0 (67%) | 1,633.9 (100%) |
| (2) <u>CARP-IC</u> (x 1,000 ha) | | | |
| NIS/NIP | 44.8 (12%) | 48.0 (14%) | 92.8 (27%) |
| CIS/CIP | <u>179.0 (51%)</u> | <u>81.6 (23%)</u> | <u>260.6 (74%)</u> |
| Total | 223.8 (63%) | 129.6 (37%) | 353.4 (100%) |
| (3) <u>Total</u> (x 1,000 ha), above (1) + (2) | | | |
| NIS/NIP | 334.0 (17%) | 836.9 (42%) | 1,170.9 (59%) |
| CIS/CIP | <u>420.7 (21%)</u> | <u>395.7 (20%)</u> | <u>816.4 (41%)</u> |
| Total | 754.7 (38%) | 1,232.6 (62%) | 1,987.3 (100%) |

(2) ACTUAL ACCOMPLISHMENT :1980 - 1989

(Unit: 1,000 ha)

| | New Development | Rehabilitation | Total |
|---------|-----------------|----------------|--------------|
| NIS/NIP | 145.9 | 553.3 | 699.2 |
| CIS/CIP | <u>143.9</u> | <u>189.7</u> | <u>333.6</u> |
| Total | 289.8 | 743.0 | 1,0032.8 |

(3) COMPARISON BETWEEN ACTUAL ACCOMPLISHMENT (1980 - 1989) AND DEVELOPMENT TARGET (1990 - 2000)

(Unit: ha/year)

| | Actual Accomplishment (1980 - 1989) (1) | Development Target (1990 - 2000) (2) | Ratio (%) (2)/(1) |
|------------------------|---|--|----------------------|
| <u>New Development</u> | | | |
| NIS/NIP | 14,600 ha | 30,400 ha | 208 % |
| CIS/CIP | <u>14,400 ha</u> | <u>38,200 ha</u> | <u>265 %</u> |
| <u>Rehabilitation</u> | | | |
| NIS/NIP | 55,300 ha | 78,800 ha | 142 % |
| CIS/CIP | <u>19,000 ha</u> | <u>36,000 ha</u> | <u>189 %</u> |
| Total | 103,300 ha | 183,400 ha | 178 % |

Table 10-01

REGIONAL ANNUAL DEVELOPMENT AREA OF GROUP "A" SUB-PROJECTS

CIPs

Unit:ha

| Region | First 5 Years | | | | | Second 5 Years | | | | | Total |
|-------------|---------------|-------|-------|-------|------|----------------|------|------|------|------|--------|
| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | |
| Region I | 632 | 809 | 177 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,618 |
| Region II | 344 | 366 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 731 |
| Region III | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Region IV | 243 | 925 | 758 | 78 | 0 | 0 | 0 | 0 | 0 | 0 | 2,004 |
| Region V | 145 | 694 | 960 | 410 | 0 | 0 | 0 | 0 | 0 | 0 | 2,209 |
| Region VI | 202 | 800 | 730 | 132 | 0 | 0 | 0 | 0 | 0 | 0 | 1,864 |
| Region VII | 181 | 698 | 788 | 631 | 362 | 0 | 0 | 0 | 0 | 0 | 2,660 |
| Region VIII | 370 | 852 | 481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,703 |
| Region IX | 145 | 145 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 290 |
| Region X | 579 | 1,496 | 1,391 | 476 | 0 | 0 | 0 | 0 | 0 | 0 | 3,942 |
| Region XI | 354 | 804 | 572 | 120 | 0 | 0 | 0 | 0 | 0 | 0 | 1,850 |
| Region XII | 463 | 1,102 | 858 | 367 | 146 | 0 | 0 | 0 | 0 | 0 | 2,936 |
| Total | 3,658 | 8,691 | 6,736 | 2,214 | 508 | 0 | 0 | 0 | 0 | 0 | 21,807 |
| (%) | (17%) | (40%) | (31%) | (10%) | (2%) | (0%) | (0%) | (0%) | (0%) | (0%) | (100%) |

CISs

Unit:ha

| Region | First 5 Years | | | | | Second 5 Years | | | | | Total |
|-------------|---------------|-------|--------|--------|-------|----------------|-------|-------|------|------|--------|
| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | |
| Region I | 488 | 767 | 1,243 | 988 | 209 | 209 | 209 | 209 | 128 | 0 | 4,450 |
| Region II | 139 | 149 | 1,301 | 1,802 | 511 | 0 | 0 | 0 | 0 | 0 | 3,902 |
| Region III | 249 | 249 | 305 | 595 | 305 | 0 | 0 | 0 | 0 | 0 | 1,703 |
| Region IV | 185 | 918 | 1,080 | 572 | 226 | 0 | 0 | 0 | 0 | 0 | 2,981 |
| Region V | 358 | 747 | 1,344 | 1,485 | 538 | 0 | 0 | 0 | 0 | 0 | 4,472 |
| Region VI | 224 | 825 | 1,168 | 873 | 354 | 94 | 47 | 0 | 0 | 0 | 3,585 |
| Region VII | 527 | 527 | 948 | 1,082 | 278 | 230 | 96 | 0 | 0 | 0 | 3,688 |
| Region VIII | 166 | 673 | 1,706 | 1,957 | 1,304 | 1,089 | 1,089 | 1,172 | 666 | 42 | 9,864 |
| Region IX | 582 | 807 | 442 | 217 | 0 | 0 | 0 | 0 | 0 | 0 | 2,048 |
| Region X | 0 | 226 | 1,278 | 1,936 | 1,354 | 470 | 0 | 0 | 0 | 0 | 5,264 |
| Region XI | 254 | 762 | 1,149 | 1,057 | 833 | 417 | 0 | 0 | 0 | 0 | 4,472 |
| Region XII | 60 | 60 | 1,237 | 1,238 | 0 | 0 | 0 | 0 | 0 | 0 | 2,595 |
| Total | 3,232 | 6,710 | 13,201 | 13,802 | 5,912 | 2,509 | 1,441 | 1,381 | 794 | 42 | 49,024 |
| (%) | (7%) | (14%) | (27%) | (28%) | (12%) | (5%) | (3%) | (3%) | (1%) | (0%) | (100%) |

REGIONAL ANNUAL DEVELOPMENT AREA OF ALL THE SUB-PROJECTS

CIPs

| Region | First 5 Years | | | | | Second 5 Years | | | | | Unit:ha |
|-------------|---------------|-------|--------|--------|--------|----------------|--------|--------|--------|--------|---------|
| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Total |
| Region I | 632 | 809 | 2,481 | 4,679 | 4,968 | 5,539 | 5,958 | 6,031 | 6,031 | 3,014 | 40,142 |
| Region II | 344 | 366 | 2,241 | 5,027 | 5,612 | 5,612 | 5,876 | 6,356 | 6,657 | 3,366 | 41,457 |
| Region III | 0 | 0 | 823 | 1,573 | 1,464 | 1,319 | 1,200 | 1,200 | 1,102 | 500 | 9,181 |
| Region IV | 243 | 925 | 1,513 | 2,608 | 3,880 | 4,005 | 3,799 | 3,767 | 3,649 | 1,784 | 26,173 |
| Region V | 145 | 694 | 2,460 | 3,683 | 3,471 | 3,337 | 3,337 | 4,126 | 4,192 | 1,862 | 27,307 |
| Region VI | 202 | 800 | 1,551 | 1,762 | 1,603 | 1,562 | 1,634 | 1,643 | 1,568 | 789 | 13,114 |
| Region VII | 181 | 698 | 1,140 | 1,349 | 1,112 | 714 | 564 | 439 | 439 | 198 | 6,834 |
| Region VIII | 370 | 852 | 1,322 | 2,155 | 2,657 | 2,669 | 2,908 | 2,837 | 2,166 | 886 | 18,822 |
| Region IX | 145 | 145 | 895 | 1,634 | 1,404 | 1,322 | 1,322 | 1,322 | 1,172 | 511 | 9,872 |
| Region X | 579 | 1,496 | 3,743 | 4,802 | 4,016 | 4,263 | 4,467 | 4,510 | 4,424 | 2,130 | 34,430 |
| Region XI | 354 | 804 | 1,133 | 1,521 | 1,649 | 1,663 | 1,663 | 1,957 | 1,589 | 532 | 12,865 |
| Region XII | 463 | 1,102 | 3,703 | 6,399 | 6,533 | 6,387 | 7,006 | 8,206 | 7,034 | 2,970 | 49,803 |
| Total | 3,658 | 8,691 | 23,005 | 37,192 | 38,369 | 38,392 | 39,734 | 42,394 | 40,023 | 18,542 | 290,000 |
| (%) | (1%) | (3%) | (8%) | (13%) | (13%) | (13%) | (14%) | (15%) | (14%) | (6%) | (100%) |

CISs

| Region | First 5 Years | | | | | Second 5 Years | | | | | Unit:ha |
|-------------|---------------|-------|--------|--------|--------|----------------|--------|--------|--------|--------|---------|
| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Total |
| Region I | 488 | 767 | 5,076 | 9,043 | 9,001 | 9,447 | 9,132 | 8,938 | 9,252 | 4,635 | 65,779 |
| Region II | 139 | 149 | 1,927 | 4,309 | 4,863 | 5,145 | 5,412 | 5,458 | 5,513 | 2,803 | 35,718 |
| Region III | 249 | 249 | 1,965 | 4,180 | 4,921 | 5,407 | 5,480 | 5,573 | 5,573 | 2,791 | 36,388 |
| Region IV | 185 | 918 | 2,157 | 3,262 | 4,215 | 4,744 | 4,707 | 4,780 | 4,844 | 2,394 | 32,206 |
| Region V | 358 | 747 | 1,795 | 3,647 | 3,687 | 2,965 | 3,131 | 3,216 | 2,636 | 1,143 | 23,325 |
| Region VI | 224 | 825 | 1,352 | 1,499 | 1,284 | 1,061 | 1,004 | 938 | 1,056 | 614 | 9,857 |
| Region VII | 527 | 527 | 948 | 1,442 | 1,008 | 875 | 721 | 708 | 637 | 278 | 7,671 |
| Region VIII | 166 | 673 | 1,834 | 2,121 | 1,459 | 1,346 | 1,374 | 1,384 | 1,106 | 417 | 11,880 |
| Region IX | 582 | 807 | 837 | 961 | 708 | 708 | 746 | 766 | 766 | 397 | 7,278 |
| Region X | 0 | 226 | 1,278 | 2,204 | 2,395 | 2,239 | 1,964 | 1,963 | 1,970 | 975 | 15,214 |
| Region XI | 254 | 762 | 1,981 | 2,641 | 2,378 | 2,120 | 1,795 | 1,557 | 1,374 | 618 | 15,480 |
| Region XII | 60 | 60 | 1,910 | 3,044 | 2,589 | 2,890 | 2,759 | 2,656 | 2,542 | 1,211 | 19,721 |
| Total | 3,232 | 6,710 | 23,060 | 38,353 | 38,508 | 38,947 | 38,225 | 37,937 | 37,269 | 18,276 | 280,517 |
| (%) | (1%) | (2%) | (8%) | (14%) | (14%) | (14%) | (14%) | (13%) | (13%) | (7%) | (100%) |

Table 10-03

**TOTAL FUND REQUIREMENT
FOR 10 YEAR DEVELOPMENT PROGRAM (1993-2002)**

| (Unit: P million) | | | |
|--------------------------------|----------------|----------------|----------------|
| Priority Group/Cost Items | CISs | CIPs | Total |
| "A" Group Sub-projects | | | |
| Nos. of sub-projects (nos.) | 313 | 146 | 459 |
| Designed irrigable areas (ha) | 49,000 | 21,800 | 70,800 |
| (1) Feasibility studies | 52.5 | 0.0 | 52.5 |
| (2) Engineering Designs | 20.0 | 6.7 | 26.7 |
| (3) Institutional activities | 46.9 | 52.2 | 99.1 |
| (4) Project costs | 532.0 | 950.9 | 1,482.9 |
| <u>Sub-total (1)</u> | <u>651.4</u> | <u>1,009.8</u> | <u>1,661.2</u> |
| "B" Group Sub-projects | | | |
| Nos. of sub-projects (nos.) | 365 | 58 | 423 |
| Designed irrigable areas (ha) | 50,600 | 8,000 | 58,600 |
| (1) Feasibility studies | 75.8 | 12.2 | 88.0 |
| (2) Engineering Designs | 25.8 | 4.0 | 29.8 |
| (3) Institutional activities | 55.2 | 16.7 | 71.9 |
| (4) Project costs | 549.0 | 353.6 | 902.6 |
| <u>Sub-total (2)</u> | <u>705.8</u> | <u>386.5</u> | <u>1,092.3</u> |
| "C" Group Sub-projects | | | |
| Nos. of sub-projects (nos.) | 537 | 1,148 | 1,685 |
| Designed irrigable areas (ha) | 75,200 | 165,700 | 240,900 |
| (1) Feasibility studies | 113.5 | 249.2 | 362.7 |
| (2) Engineering Designs | 37.9 | 81.0 | 118.9 |
| (3) Institutional activities | 80.6 | 345.1 | 425.7 |
| (4) Project costs | 816.0 | 7,288.8 | 8,104.8 |
| <u>Sub-total (3)</u> | <u>1,048.0</u> | <u>7,964.1</u> | <u>9,012.1</u> |
| Total (4)=(1)+(2)+(3) | 2,405.2 | 9,360.4 | 11,765.6 |
| "D" Group Sub-projects | | | |
| Nos. of sub-projects (nos.) | 760 | 710 | 1,470 |
| Designed irrigable areas (ha) | 105,700 | 94,500 | 200,200 |
| (1) Feasibility studies | 159.0 | 142.4 | 301.4 |
| (2) Engineering Designs | 53.6 | 50.2 | 103.8 |
| (3) Institutional activities | 135.5 | 214.2 | 349.7 |
| (4) Project costs | 1,126.7 | 4,157.7 | 5,284.4 |
| <u>Sub-total (5)</u> | <u>1,474.8</u> | <u>4,564.5</u> | <u>6,039.3</u> |
| Total (6)=(4)+(5) | 3,880.0 | 13,924.9 | 17,804.9 |
| Price Contingencies (7) | 1,633.0 | 6,034.6 | 7,667.6 |
| Grand Total (8)=(6)+(7) | 5,513.0 | 19,959.5 | 25,472.5 |

**TOTAL FUND REQUIREMENTS AT REGIONAL LEVEL
FOR 10 YEAR DEVELOPMENT PROGRAM (1993-2002)**

(Unit : Million Pesos)

| REGION NO. | CISs (%) | CIPs (%) | Total (%) |
|----------------------------|----------------------|-----------------------|-----------------------|
| REGION I | 913.2 (23) | 1,960.5 (14) | 2,873.7 (17) |
| REGION II | 499.7 (13) | 2,018.3 (14) | 2,518.0 (15) |
| REGION III | 492.0 (13) | 440.6 (3) | 932.6 (5) |
| REGION IV | 450.7 (11) | 1,286.4 (9) | 1,737.1 (10) |
| REGION V | 335.3 (9) | 1,300.9 (9) | 1,636.2 (9) |
| REGION VI | 129.8 (3) | 620.2 (4) | 750.0 (4) |
| REGION VII | 103.4 (3) | 322.3 (2) | 425.7 (2) |
| REGION VIII | 196.7 (5) | 923.6 (7) | 1,120.3 (6) |
| REGION IX | 104.2 (3) | 477.6 (3) | 581.8 (3) |
| REGION X | 183.4 (5) | 1,638.0 (13) | 1,821.4 (10) |
| REGION XI | 204.0 (5) | 584.8 (4) | 788.8 (4) |
| REGION XII | 267.6 (7) | 2,351.7 (18) | 2,619.3 (15) |
| Sub-total | 3,880.0 (100) | 13,924.9 (100) | 17,804.9 (100) |
| Price Contingencies | 1,633.0 | 6,034.6 | 7,667.6 |
| Total | 5,513.0 | 19,959.5 | 25,472.5 |

Table 10-05

ANNUAL FUND REQUIREMENTS AT REGIONAL LEVEL

(Unit : Million Pesos)

| REGION | First 5Years | | | | | Second 5Years | | | | | Total |
|---------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|----------------------|----------------------|--------------------|----------|
| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | |
| REGION I | 55.2 ¹ | 75.6 ¹ | 201.3 ¹ | 348.4 ¹ | 367.5 ¹ | 403.5 ¹ | 419.1 ¹ | 398.0 ¹ | 388.3 ¹ | 216.8 ¹ | 2,873.7 |
| REGION II | 36.1 ¹ | 46.6 ¹ | 147.8 ¹ | 300.8 ¹ | 337.6 ¹ | 345.5 ¹ | 362.5 ¹ | 366.6 ¹ | 370.3 ¹ | 204.2 ¹ | 2,518.0 |
| REGION III | 10.4 ¹ | 14.8 ¹ | 72.4 ¹ | 130.1 ¹ | 135.8 ¹ | 137.3 ¹ | 132.4 ¹ | 123.5 ¹ | 114.8 ¹ | 61.1 ¹ | 932.6 |
| REGION IV | 25.9 ¹ | 82.2 ¹ | 124.9 ¹ | 177.0 ¹ | 243.8 ¹ | 256.6 ¹ | 248.0 ¹ | 234.9 ¹ | 223.5 ¹ | 120.3 ¹ | 1,737.1 |
| REGION V | 23.2 ¹ | 53.9 ¹ | 142.4 ¹ | 223.6 ¹ | 217.8 ¹ | 206.4 ¹ | 206.1 ¹ | 231.2 ¹ | 222.5 ¹ | 109.1 ¹ | 1,636.2 |
| REGION VI | 15.2 ¹ | 45.4 ¹ | 84.6 ¹ | 100.9 ¹ | 94.5 ¹ | 91.1 ¹ | 94.0 ¹ | 90.5 ¹ | 85.1 ¹ | 48.7 ¹ | 750.0 |
| REGION VII | 18.2 ¹ | 41.6 ¹ | 66.2 ¹ | 80.4 ¹ | 65.1 ¹ | 46.0 ¹ | 37.2 ¹ | 29.6 ¹ | 27.8 ¹ | 13.6 ¹ | 425.7 |
| REGION VIII | 29.3 ¹ | 63.8 ¹ | 99.9 ¹ | 139.0 ¹ | 153.4 ¹ | 152.5 ¹ | 161.3 ¹ | 153.4 ¹ | 115.8 ¹ | 51.9 ¹ | 1,120.3 |
| REGION IX | 19.6 ¹ | 24.3 ¹ | 56.5 ¹ | 90.2 ¹ | 77.2 ¹ | 74.5 ¹ | 74.1 ¹ | 71.3 ¹ | 62.9 ¹ | 31.2 ¹ | 581.8 |
| REGION X | 39.0 ¹ | 85.4 ¹ | 190.7 ¹ | 244.8 ¹ | 216.6 ¹ | 232.0 ¹ | 239.9 ¹ | 232.6 ¹ | 224.0 ¹ | 116.4 ¹ | 1,821.4 |
| REGION XI | 20.8 ¹ | 41.9 ¹ | 73.1 ¹ | 103.8 ¹ | 108.5 ¹ | 107.5 ¹ | 102.6 ¹ | 108.3 ¹ | 88.1 ¹ | 34.2 ¹ | 788.8 |
| REGION XII | 35.2 ¹ | 65.6 ¹ | 205.9 ¹ | 339.8 ¹ | 344.5 ¹ | 345.5 ¹ | 366.6 ¹ | 404.9 ¹ | 346.0 ¹ | 165.3 ¹ | 2,619.3 |
| Sub-total | 328.1 | 641.1 | 1,465.7 | 2,278.8 | 2,362.3 | 2,398.4 | 2,443.8 | 2,444.8 | 2,269.1 | 1,172.8 | 17,804.9 |
| Price contingencies | 45.3 ¹ | 120.8 ¹ | 352.9 ¹ | 673.4 ¹ | 833.2 ¹ | 988.9 ¹ | 1,159.8 ¹ | 1,319.2 ¹ | 1,378.5 ¹ | 795.6 ¹ | 7,667.6 |
| Total | 373.4 | 761.9 | 1,818.6 | 2,952.2 | 3,195.5 | 3,387.3 | 3,603.6 | 3,764.0 | 3,647.6 | 1,968.4 | 25,472.5 |

**IMPLEMENTATION SCHEDULE AND ANNUAL FUND REQUIREMENTS
AT NATIONAL LEVEL**

| SSIDP Target Area (1993-2002) : 280,000 ha for CISOs & 290,000 ha for CIPs | | | | | | | | | | | | | (Unit : Million Pesos) | |
|--|---------------------|------------------------------|---------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------------|-----------------|
| Sub-Projects | No. of Sub-Projects | Designed Irrigable Area (ha) | First 5 Years | | | | | Second 5 Years | | | | | Total | |
| | | | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | | |
| CISOs | | | | | | | | | | | | | | |
| I "A" Group | | | | | | | | | | | | | | |
| F/S | 227 | 34,856 | 26.0 | 13.3 | 5.2 | 3.0 | 2.3 | 2.5 | 0.2 | | | | | 52.5 |
| Design | 280 | 41,913 | 2.9 | 8.6 | 4.4 | 1.6 | 0.9 | 0.7 | 0.8 | 0.1 | | | | 20.0 |
| Inst.Activities | 313 | 49,024 | 3.1 | 5.9 | 7.7 | 8.2 | 7.9 | 6.9 | 3.4 | 1.8 | 1.0 | 1.0 | | 46.9 |
| Construction | 313 | 49,024 | 35.9 | 74.5 | 141.5 | 144.3 | 59.6 | 27.3 | 18.9 | 18.7 | 10.7 | 0.6 | | 532.0 |
| Sub-Total (1) | 313 | 49,024 | 67.9 | 102.3 | 158.8 | 157.1 | 70.7 | 37.4 | 23.3 | 20.6 | 11.7 | 1.6 | | 651.4 |
| II "B" Group | | | | | | | | | | | | | | |
| Re-Study | 365 | 50,583 | 9.9 | 15.5 | 19.6 | 12.0 | 8.8 | 5.4 | 4.6 | | | | | 75.8 |
| Design | 365 | 50,583 | | 3.3 | 5.8 | 6.5 | 3.9 | 2.9 | 1.9 | 1.6 | | | | 25.8 |
| Inst.Activities | 365 | 50,583 | | 1.5 | 3.9 | 6.6 | 8.3 | 9.5 | 8.7 | 7.3 | 4.6 | 4.8 | | 55.2 |
| Construction | 365 | 50,583 | | | 35.8 | 91.6 | 127.2 | 114.6 | 75.1 | 51.4 | 36.3 | 17.0 | | 549.0 |
| Sub-Total (2) | 365 | 50,583 | 9.9 | 20.3 | 65.1 | 116.7 | 148.2 | 132.4 | 90.2 | 60.3 | 40.9 | 21.8 | | 705.8 |
| III "C" Group | | | | | | | | | | | | | | |
| F/S | 537 | 75,162 | 19.6 | 23.4 | 18.4 | 21.2 | 11.6 | 11.0 | 8.3 | | | | | 113.5 |
| Design | 537 | 75,162 | | 6.2 | 7.7 | 5.8 | 7.2 | 4.5 | 4.0 | 2.5 | | | | 37.9 |
| Inst.Activities | 537 | 75,162 | | 2.6 | 6.0 | 8.4 | 11.5 | 13.4 | 12.4 | 10.2 | 7.7 | 8.4 | | 80.6 |
| Construction | 537 | 75,162 | | | 70.5 | 154.9 | 149.9 | 141.5 | 117.9 | 82.0 | 69.2 | 30.1 | | 816.0 |
| Sub-Total (3) | 537 | 75,162 | 19.6 | 32.2 | 102.6 | 190.3 | 180.2 | 170.4 | 142.6 | 94.7 | 76.9 | 38.5 | | 1,048.0 |
| IV "D" Group | | | | | | | | | | | | | | |
| F/S | 760 | 105,748 | 0.2 | 5.5 | 15.8 | 22.1 | 34.6 | 38.8 | 42.0 | | | | | 159.0 |
| Design | 760 | 105,748 | | 0.1 | 1.9 | 5.4 | 7.5 | 11.2 | 12.8 | 14.7 | | | | 53.6 |
| Inst.Activities | 760 | 105,748 | | 0.1 | 0.8 | 3.1 | 6.3 | 12.6 | 19.4 | 26.2 | 25.3 | 41.7 | | 135.5 |
| Construction | 760 | 105,748 | | | 0.8 | 20.1 | 76.7 | 137.1 | 201.6 | 258.0 | 284.5 | 147.9 | | 1,126.7 |
| Sub-Total (4) | 760 | 105,748 | 0.2 | 5.7 | 19.3 | 50.7 | 125.1 | 199.7 | 275.8 | 298.9 | 309.8 | 189.6 | | 1,474.8 |
| Total (1) | 1,975 | 280,517 | 97.6 | 160.5 | 345.8 | 514.8 | 524.2 | 539.9 | 531.9 | 474.5 | 439.3 | 251.5 | | 3,880.0 |
| CIPs | | | | | | | | | | | | | | |
| V "A" Group | | | | | | | | | | | | | | |
| Design | 97 | 13,376 | 4.8 | 1.5 | 0.4 | | | | | | | | | 6.7 |
| Inst.Activities | 146 | 21,807 | 12.0 | 10.2 | 10.5 | 10.5 | 7.0 | 1.7 | 0.3 | | | | | 52.2 |
| Construction | 146 | 21,807 | 165.1 | 384.1 | 288.2 | 91.4 | 22.1 | | | | | | | 950.9 |
| Sub-Total (5) | 146 | 21,807 | 181.9 | 395.8 | 299.1 | 101.9 | 29.1 | 1.7 | 0.3 | | | | | 1,009.8 |
| VI "B" Group | | | | | | | | | | | | | | |
| Re-Study | 58 | 8,028 | 8.5 | 3.7 | | | | | | | | | | 12.2 |
| Design | 58 | 8,028 | | 2.8 | 1.2 | | | | | | | | | 4.0 |
| Inst.Activities | 58 | 8,028 | | 2.5 | 3.3 | 3.3 | 3.3 | 3.3 | 1.0 | | | | | 16.7 |
| Construction | 58 | 8,028 | | | 123.7 | 176.8 | 53.1 | | | | | | | 353.6 |
| Sub-Total (6) | 58 | 8,028 | 8.5 | 9.0 | 128.2 | 180.1 | 56.4 | 3.3 | 1.0 | | | | | 386.5 |
| VII "C" Group | | | | | | | | | | | | | | |
| F/S | 1,148 | 165,665 | 35.9 | 47.4 | 50.0 | 41.9 | 35.0 | 25.5 | 13.5 | | | | | 249.2 |
| Design | 1,148 | 165,665 | | 11.2 | 15.6 | 16.5 | 13.5 | 11.3 | 8.1 | 4.8 | | | | 81.0 |
| Inst.Activities | 1,148 | 165,665 | | 9.8 | 23.6 | 37.5 | 48.7 | 58.1 | 55.2 | 45.6 | 31.3 | 35.3 | | 345.1 |
| Construction | 1,148 | 165,665 | | | 533.6 | 1,236.1 | 1,435.5 | 1,345.8 | 1,124.0 | 878.3 | 540.1 | 195.4 | | 7,288.8 |
| Sub-Total (7) | 1,148 | 165,665 | 35.9 | 68.4 | 622.8 | 1,332.0 | 1,532.7 | 1,440.7 | 1,200.8 | 928.7 | 571.4 | 230.7 | | 7,964.1 |
| VIII "D" Group | | | | | | | | | | | | | | |
| F/S | 710 | 94,500 | 4.2 | 4.7 | 7.3 | 16.1 | 26.5 | 41.0 | 42.6 | | | | | 142.4 |
| Design | 710 | 94,500 | | 1.4 | 1.6 | 2.9 | 6.1 | 9.9 | 13.8 | 14.5 | | | | 50.2 |
| Inst.Activities | 710 | 94,500 | | 1.3 | 2.4 | 4.9 | 10.1 | 18.5 | 29.3 | 40.0 | 37.5 | 70.2 | | 214.2 |
| Construction | 710 | 94,500 | | | 58.5 | 126.1 | 177.2 | 343.4 | 624.1 | 987.1 | 1,220.9 | 620.4 | | 4,157.7 |
| Sub-Total (8) | 710 | 94,500 | 4.2 | 7.4 | 69.8 | 150.0 | 219.9 | 412.8 | 709.8 | 1,041.6 | 1,258.4 | 690.6 | | 4,564.5 |
| Total (2) | 2,062 | 290,000 | 230.5 | 480.6 | 1,119.9 | 1,764.0 | 1,838.1 | 1,858.5 | 1,911.9 | 1,970.3 | 1,829.8 | 921.3 | | 13,924.9 |
| Total (1)+(2) | 4,037 | 570,517 | 328.1 | 641.1 | 1,465.7 | 2,278.8 | 2,362.3 | 2,398.4 | 2,443.8 | 2,444.8 | 2,269.1 | 1,172.8 | | 17,804.9 |
| Price Contingencies | | | 45.3 | 120.8 | 352.9 | 673.4 | 833.2 | 988.9 | 1,159.8 | 1,319.2 | 1,378.5 | 795.6 | | 7,667.6 |
| Grand Total | 4,037 | 570,517 | 373.4 | 761.9 | 1,818.6 | 2,952.2 | 3,195.5 | 3,387.3 | 3,603.6 | 3,764.0 | 3,647.6 | 1,968.4 | | 25,472.5 |

Table 11-01

**IRRIGATION AREAS UNDER
UNDER WITHOUT AND WITH PROJECT CONDITIONS**

| I. Without Project Condition (unit:ha) | | | | | | | | | | |
|---|----------------|---------------|---------------|---------------|---------------|-----------------|----------------|----------------|----------------|----------------|
| Region | "A" Group | | | | | 10 Year Program | | | | |
| | Irrigated Area | | | Rainfed | Total | Irrigated Area | | | Rainfed | Total |
| | Wet Season | Dry Season | Sub-Total | | | Wet Season | Dry Season | Sub-Total | | |
| Region I | 3,671 | 2,300 | 5,971 | 2,397 | 8,368 | 54,268 | 41,562 | 95,830 | 51,653 | 147,483 |
| Region II | 2,833 | 2,527 | 5,360 | 1,800 | 7,160 | 25,931 | 21,657 | 47,588 | 51,244 | 98,832 |
| Region III | 1,245 | 1,272 | 2,517 | 458 | 2,975 | 26,600 | 23,920 | 50,520 | 18,969 | 69,489 |
| Region IV | 2,316 | 2,040 | 4,356 | 2,669 | 7,025 | 25,024 | 21,312 | 46,336 | 33,355 | 79,691 |
| Region V | 3,537 | 2,837 | 6,374 | 3,144 | 9,518 | 18,450 | 14,963 | 33,413 | 32,182 | 65,595 |
| Region VI | 2,603 | 2,544 | 5,147 | 2,846 | 7,993 | 7,156 | 6,549 | 13,705 | 15,815 | 29,520 |
| Region VII | 2,659 | 2,068 | 4,727 | 3,689 | 8,416 | 5,531 | 4,070 | 9,601 | 8,974 | 18,575 |
| Region VIII | 6,313 | 4,847 | 11,160 | 5,254 | 16,414 | 7,603 | 6,189 | 13,792 | 23,099 | 36,891 |
| Region IX | 1,657 | 1,395 | 3,052 | 681 | 3,733 | 5,888 | 4,407 | 10,295 | 11,262 | 21,557 |
| Region X | 3,316 | 2,759 | 6,075 | 5,890 | 11,965 | 9,585 | 7,886 | 17,471 | 40,059 | 57,530 |
| Region XI | 3,157 | 2,782 | 5,939 | 3,165 | 9,104 | 10,929 | 9,113 | 20,042 | 17,416 | 37,458 |
| Region XII | 2,011 | 1,521 | 3,532 | 3,520 | 7,052 | 15,284 | 11,558 | 26,842 | 54,240 | 81,082 |
| Total | 35,318 | 28,892 | 64,210 | 35,513 | 99,723 | 212,249 | 173,186 | 385,435 | 358,268 | 743,703 |

| II. With Project Condition (unit:ha) | | | | | | | | | | |
|---|----------------|---------------|----------------|----------|----------------|-----------------|----------------|------------------|----------|------------------|
| Region | "A" Group | | | | | 10 Year Program | | | | |
| | Irrigated Area | | | Rainfed | Total | Irrigated Area | | | Rainfed | Total |
| | Wet Season | Dry Season | Sub-Total | | | Wet Season | Dry Season | Sub-Total | | |
| Region I | 6,068 | 4,693 | 10,761 | 0 | 10,761 | 105,921 | 93,211 | 199,132 | 0 | 199,132 |
| Region II | 4,633 | 4,260 | 8,893 | 0 | 8,893 | 77,175 | 67,914 | 145,089 | 0 | 145,089 |
| Region III | 1,703 | 1,703 | 3,406 | 0 | 3,406 | 45,569 | 40,100 | 85,669 | 0 | 85,669 |
| Region IV | 4,985 | 4,156 | 9,141 | 0 | 9,141 | 58,379 | 51,373 | 109,752 | 0 | 109,752 |
| Region V | 6,681 | 5,879 | 12,560 | 0 | 12,560 | 50,632 | 44,556 | 95,188 | 0 | 95,188 |
| Region VI | 5,449 | 5,029 | 10,478 | 0 | 10,478 | 22,971 | 20,214 | 43,185 | 0 | 43,185 |
| Region VII | 6,348 | 5,744 | 12,092 | 0 | 12,092 | 14,505 | 12,764 | 27,269 | 0 | 27,269 |
| Region VIII | 11,567 | 9,771 | 21,338 | 0 | 21,338 | 30,702 | 27,017 | 57,719 | 0 | 57,719 |
| Region IX | 2,338 | 2,318 | 4,656 | 0 | 4,656 | 17,150 | 15,092 | 32,242 | 0 | 32,242 |
| Region X | 9,206 | 8,272 | 17,478 | 0 | 17,478 | 49,644 | 43,686 | 93,330 | 0 | 93,330 |
| Region XI | 6,322 | 6,009 | 12,331 | 0 | 12,331 | 28,345 | 24,943 | 53,288 | 0 | 53,288 |
| Region XII | 5,531 | 5,103 | 10,634 | 0 | 10,634 | 69,524 | 61,181 | 130,705 | 0 | 130,705 |
| Total | 70,831 | 62,937 | 133,768 | 0 | 133,768 | 570,517 | 502,051 | 1,072,568 | 0 | 1,072,568 |

**PADDY PRODUCTION UNDER
WITHOUT AND WITH PROJECT CONDITIONS**

| I. Without Project Condition | | | | | | | | | | | (unit:ton) |
|------------------------------|----------------|----------------|----------------|---------------|----------------|-----------------|----------------|------------------|----------------|------------------|------------|
| Region | "A" Group | | | | | 10 Year Program | | | | | |
| | Irrigated Area | | | Rainfed | Total | Irrigated Area | | | Rainfed | Total | |
| | Wet Season | Dry Season | Sub-Total | | | Wet Season | Dry Season | Sub-Total | | | |
| Region I | 12,004 | 7,912 | 19,916 | 6,711 | 26,627 | 177,456 | 142,973 | 320,429 | 144,629 | 465,058 | |
| Region II | 9,349 | 8,845 | 18,194 | 3,726 | 21,920 | 85,572 | 75,800 | 161,372 | 106,075 | 267,447 | |
| Region III | 5,105 | 5,444 | 10,549 | 1,273 | 11,822 | 109,060 | 102,378 | 211,438 | 52,734 | 264,172 | |
| Region IV | 8,500 | 8,058 | 16,558 | 6,726 | 23,284 | 91,838 | 84,182 | 176,020 | 84,055 | 260,075 | |
| Region V | 13,122 | 10,525 | 23,647 | 9,935 | 33,582 | 68,450 | 55,513 | 123,963 | 101,695 | 225,658 | |
| Region VI | 8,694 | 7,937 | 16,631 | 7,741 | 24,372 | 23,901 | 20,433 | 44,334 | 43,017 | 87,351 | |
| Region VII | 9,812 | 7,445 | 17,257 | 9,333 | 26,590 | 20,409 | 14,652 | 35,061 | 22,704 | 57,765 | |
| Region VIII | 21,843 | 15,220 | 37,063 | 12,347 | 49,410 | 26,306 | 19,433 | 45,739 | 54,283 | 100,022 | |
| Region IX | 7,258 | 6,640 | 13,898 | 2,003 | 15,901 | 25,789 | 20,977 | 46,766 | 33,111 | 79,877 | |
| Region X | 13,430 | 10,208 | 23,638 | 16,492 | 40,130 | 38,819 | 29,178 | 67,997 | 112,165 | 180,162 | |
| Region XI | 12,186 | 10,099 | 22,285 | 10,888 | 33,173 | 42,186 | 33,080 | 75,266 | 59,911 | 135,177 | |
| Region XII | 7,199 | 5,354 | 12,553 | 9,363 | 21,916 | 54,717 | 40,684 | 95,401 | 144,278 | 239,679 | |
| Total | 128,502 | 103,687 | 232,189 | 96,538 | 328,727 | 764,503 | 639,283 | 1,403,786 | 958,657 | 2,362,443 | |

| II. With Project Condition | | | | | | | | | | | (unit:ton) |
|----------------------------|----------------|----------------|----------------|----------|----------------|------------------|------------------|------------------|----------|------------------|------------|
| Region | "A" Group | | | | | 10 Year Program | | | | | |
| | Irrigated Area | | | Rainfed | Total | Irrigated Area | | | Rainfed | Total | |
| | Wet Season | Dry Season | Sub-Total | | | Wet Season | Dry Season | Sub-Total | | | |
| Region I | 19,843 | 16,144 | 35,987 | 0 | 35,987 | 346,361 | 320,646 | 667,007 | 0 | 667,007 | |
| Region II | 15,289 | 14,910 | 30,199 | 0 | 30,199 | 254,677 | 237,699 | 492,376 | 0 | 492,376 | |
| Region III | 6,982 | 7,289 | 14,271 | 0 | 14,271 | 186,833 | 171,628 | 358,461 | 0 | 358,461 | |
| Region IV | 18,295 | 16,416 | 34,711 | 0 | 34,711 | 214,251 | 202,923 | 417,174 | 0 | 417,174 | |
| Region V | 24,786 | 21,811 | 46,597 | 0 | 46,597 | 187,845 | 165,302 | 353,147 | 0 | 353,147 | |
| Region VI | 18,200 | 15,690 | 33,890 | 0 | 33,890 | 76,723 | 63,068 | 139,791 | 0 | 139,791 | |
| Region VII | 23,424 | 20,678 | 44,102 | 0 | 44,102 | 53,523 | 45,950 | 99,473 | 0 | 99,473 | |
| Region VIII | 40,021 | 30,681 | 70,702 | 0 | 70,702 | 106,229 | 84,834 | 191,063 | 0 | 191,063 | |
| Region IX | 10,240 | 11,033 | 21,273 | 0 | 21,273 | 75,117 | 71,838 | 146,955 | 0 | 146,955 | |
| Region X | 37,284 | 30,607 | 67,891 | 0 | 67,891 | 201,059 | 161,639 | 362,698 | 0 | 362,698 | |
| Region XI | 24,403 | 21,813 | 46,216 | 0 | 46,216 | 109,412 | 90,543 | 199,955 | 0 | 199,955 | |
| Region XII | 19,801 | 17,963 | 37,764 | 0 | 37,764 | 248,896 | 215,357 | 464,253 | 0 | 464,253 | |
| Total | 258,568 | 225,035 | 483,603 | 0 | 483,603 | 2,060,926 | 1,831,427 | 3,892,353 | 0 | 3,892,353 | |

Table 11-03

STRUCTURE OF PROJECTED PADDY ECONOMIC FARMGATE PRICES

| Items | Region | | | | | | | | | | | | National Average |
|--|--------|--------|--------|-------|-------|-------|--------|--------|--------|-------|-------|-------|---------------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| A. Projected rice price for 2000, FOB Bangkok, value in 1990 (US\$/ton) | 280 | 280 | 280 | 280 | 280 | 280 | 280 | 280 | 280 | 280 | 280 | 280 | 280 |
| B. Quality adjustment for Philippines rice (x 0.8) | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 |
| C. Ocean freight from Bangkok to MNL port (US\$) | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| D. Port handling, storage and other costs (pesos) | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| E. Trading margin (10% of CIF Price, US\$) | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| F. Transport cost from port to market (pesos) | 702 | 1,264 | 562 | 0 | 281 | 0 | 577 | 577 | 562 | 406 | 374 | 374 | 473 |
| G. Wholesale price of rice (1\$=27.5 x 1.25 pesos) | 10,147 | 10,709 | 10,007 | 9,445 | 9,726 | 9,445 | 10,022 | 10,022 | 10,007 | 9,851 | 9,819 | 9,819 | 9,918 |
| H. Equivalent paddy price (x 0.65) | 6,596 | 6,961 | 6,505 | 6,139 | 6,322 | 6,139 | 6,514 | 6,514 | 6,505 | 6,403 | 6,382 | 6,382 | 6,447 |
| I. Milling cost (financial value x 0.82) | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 |
| J. By-products value (financial value x 0.82) | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 |
| K. Distance between farm to wholesaler (km) (financial value x 0.78) | 62 | 73 | 33 | 104 | 36 | 71 | 78 | 80 | 126 | 51 | 70 | 73 | 71 |
| L. Transport cost from farm to wholesaler (6 peso/km/ton) (financial value x 0.78) | 290 | 342 | 154 | 487 | 168 | 332 | 365 | 374 | 590 | 239 | 328 | 342 | 334 |
| M. Farm gate price of paddy (import parity, peso/ton) | 6,206 | 6,519 | 6,251 | 5,552 | 6,054 | 5,707 | 6,049 | 6,040 | 5,815 | 6,064 | 5,954 | 5,940 | 6,013 |

Sources:

A : The World Bank, 1990, Price Prospects for Major Primary Commodities, 1988-2000, 4th Quarter 1990

B : does, Staff Appraisal Report on Second Communal Irrigation Development Project

C : National Food Authority

D : does

E : estimate by the team

F : Fertilizer and Pesticide Authority, 1990, assumed to be the same as the transport cost of fertilizers.

H, I, J : Estimated by the team.

K : based on the SSIDP inventory survey, assumed the NIA office to be situated near the wholesale market.

L : estimate by the team

**NET PRODUCTION VALUES UNDER
WITHOUT AND WITH PROJECT CONDITIONS**

I. Without Project Condition

| | "A" Group | | | | 10 Year Program | | | |
|--------------|----------------|------------------|----------------|------------------|------------------|-------------------|------------------|------------------|
| | Total | Gross | Total | Net | Total | Gross | Total | Net |
| | Production | Production | Production | Production | Production | Production | Production | Production |
| | (tons) | Value | Costs | Value | (tons) | Value | Costs | Value |
| | (0000 peso) | (0000 peso) | (0000 peso) | (0000 peso) | (tons) | (0000 peso) | (0000 peso) | (0000 peso) |
| Region I | 26,627 | 159,762 | 63,905 | 95,857 | 465,058 | 2,790,348 | 1,116,139 | 1,674,209 |
| Region II | 21,920 | 131,520 | 52,608 | 78,912 | 267,447 | 1,604,682 | 641,873 | 962,809 |
| Region III | 11,822 | 70,932 | 28,373 | 42,559 | 264,172 | 1,585,032 | 634,013 | 951,019 |
| Region IV | 23,284 | 139,704 | 55,882 | 83,822 | 260,075 | 1,560,450 | 624,180 | 936,270 |
| Region V | 33,582 | 201,492 | 80,597 | 120,895 | 225,658 | 1,353,948 | 541,579 | 812,369 |
| Region VI | 24,372 | 146,232 | 58,493 | 87,739 | 87,351 | 524,106 | 209,642 | 314,464 |
| Region VII | 26,590 | 159,540 | 63,816 | 95,724 | 57,765 | 346,590 | 138,636 | 207,954 |
| Region VIII | 49,410 | 296,460 | 118,584 | 177,876 | 100,022 | 600,132 | 240,053 | 360,079 |
| Region IX | 15,901 | 95,406 | 38,162 | 57,244 | 79,877 | 479,262 | 191,705 | 287,557 |
| Region X | 40,130 | 240,780 | 96,312 | 144,468 | 180,162 | 1,080,972 | 432,389 | 648,583 |
| Region XI | 33,173 | 199,038 | 79,615 | 119,423 | 135,177 | 811,062 | 324,425 | 486,637 |
| Region XII | 21,916 | 131,496 | 52,598 | 78,898 | 239,679 | 1,438,074 | 575,230 | 862,844 |
| Total | 328,727 | 1,972,362 | 788,945 | 1,183,417 | 2,362,443 | 14,174,658 | 5,669,864 | 8,504,794 |

II. With Project Condition

| | "A" Group | | | | 10 Year Program | | | |
|--------------|----------------|------------------|------------------|------------------|------------------|-------------------|------------------|-------------------|
| | Total | Gross | Total | Net | Total | Gross | Total | Net |
| | Production | Production | Production | Production | Production | Production | Production | Production |
| | (tons) | Value | Costs | Value | (tons) | Value | Costs | Value |
| | (0000 peso) | (0000 peso) | (0000 peso) | (0000 peso) | (tons) | (0000 peso) | (0000 peso) | (0000 peso) |
| Region I | 35,987 | 215,922 | 86,369 | 129,553 | 667,007 | 4,002,042 | 1,600,817 | 2,401,225 |
| Region II | 30,199 | 181,194 | 72,478 | 108,716 | 492,376 | 2,954,256 | 1,181,702 | 1,772,554 |
| Region III | 14,271 | 85,626 | 34,250 | 51,376 | 358,461 | 2,150,766 | 860,306 | 1,290,460 |
| Region IV | 34,711 | 208,266 | 83,306 | 124,960 | 417,174 | 2,503,044 | 1,001,218 | 1,501,826 |
| Region V | 46,597 | 279,582 | 111,833 | 167,749 | 353,147 | 2,118,882 | 847,553 | 1,271,329 |
| Region VI | 33,890 | 203,340 | 81,336 | 122,004 | 139,791 | 838,746 | 335,498 | 503,248 |
| Region VII | 44,102 | 264,612 | 105,845 | 158,767 | 99,473 | 596,838 | 238,735 | 358,103 |
| Region VIII | 70,702 | 424,212 | 169,685 | 254,527 | 191,063 | 1,146,378 | 458,551 | 687,827 |
| Region IX | 21,273 | 127,638 | 51,055 | 76,583 | 146,955 | 881,730 | 352,692 | 529,038 |
| Region X | 67,891 | 407,346 | 162,938 | 244,408 | 362,698 | 2,176,188 | 870,475 | 1,305,713 |
| Region XI | 46,216 | 277,296 | 110,918 | 166,378 | 199,955 | 1,199,730 | 479,892 | 719,838 |
| Region XII | 37,764 | 226,584 | 90,634 | 135,950 | 464,253 | 2,785,518 | 1,114,207 | 1,671,311 |
| Total | 483,603 | 2,901,618 | 1,160,647 | 1,740,971 | 3,892,353 | 23,354,118 | 9,341,646 | 14,012,472 |

ECONOMIN COST AND BENEFIT FLOW
("A" Group)

Table 11-05

(Unit : MILLION PESOS)

| Year in Order | Year | Costs | | | Gross Benefit (B) | Balance (B-C) |
|---------------|------|-------------------|-----|-----------|-------------------|---------------|
| | | Const- ruction | O&M | Total (C) | | |
| 1 | 1993 | 209 | 0 | 209 | 0 | -209 |
| 2 | 1994 | 416 | 1 | 417 | 22 | -395 |
| 3 | 1995 | 383 | 5 | 388 | 92 | -296 |
| 4 | 1996 | 216 | 11 | 227 | 218 | -9 |
| 5 | 1997 | 83 | 18 | 101 | 361 | 260 |
| 6 | 1998 | 32 | 23 | 55 | 466 | 411 |
| 7 | 1999 | 19 | 26 | 45 | 518 | 473 |
| 8 | 2000 | 17 | 27 | 44 | 538 | 494 |
| 9 | 2001 | 10 | 27 | 37 | 547 | 510 |
| 10 | 2002 | 1 | 28 | 29 | 553 | 524 |
| 11 | 2003 | 0 | 28 | 28 | 558 | 530 |
| : | | | | | | |
| 50 | 2042 | 0 | 28 | 28 | 558 | 530 |

| ECONOMIC INTERNAL RATE OF RETURN | | SENSITIVITY DATA | | | | | |
|----------------------------------|--------|------------------|------------|--------|--------|--------|--------|
| EIRR | 29.04% | Cost (%) | Benefit(%) | | | | |
| | | | -20 | -10 | 0 | 10 | 20 |
| 1)NPV OF COST (EIRR%) | 705 | -20 | 29.04% | 32.11% | 35.07% | 37.95% | 40.75% |
| | | -10 | 26.22% | 29.04% | 31.77% | 34.42% | 37.00% |
| 2)NPV OF BENEFIT (EIRR%) | 742 | 0 | 23.89% | 26.51% | 29.04% | 31.50% | 33.90% |
| | | 10 | 21.93% | 24.37% | 26.74% | 29.04% | 31.28% |
| 3)B-C(10%), million peso | 2,728 | 20 | 20.26% | 22.55% | 24.77% | 26.94% | 29.04% |
| 4)B/C(10%) | 3.571 | | | | | | |

(Unit : MILLION PESOS)

| Year in Order | Year | Costs | | | Gross Benefit (B) | Balance (B-C) |
|---------------|------|-------------------|-----|-----------|-------------------|---------------|
| | | Const- ruction | O&M | Total (C) | | |
| 1 | 1993 | 57 | 0 | 57 | 0 | -57 |
| 2 | 1994 | 85 | 0 | 85 | 5 | -80 |
| 3 | 1995 | 133 | 1 | 134 | 20 | -114 |
| 4 | 1996 | 131 | 3 | 134 | 55 | -79 |
| 5 | 1997 | 59 | 5 | 64 | 106 | 42 |
| 6 | 1998 | 31 | 7 | 38 | 159 | 121 |
| 7 | 1999 | 19 | 9 | 28 | 197 | 169 |
| 8 | 2000 | 17 | 10 | 27 | 214 | 187 |
| 9 | 2001 | 10 | 10 | 20 | 223 | 203 |
| 10 | 2002 | 1 | 11 | 12 | 229 | 217 |
| 11 | 2003 | 0 | 11 | 11 | 234 | 223 |
| : | | | | | | |
| 50 | 2042 | 0 | 11 | 11 | 234 | 223 |

| ECONOMIC INTERNAL RATE OF RETURN | | SENSITIVITY DATA | | | | | |
|----------------------------------|--------|------------------|------------|--------|--------|--------|--------|
| EIRR | 30.45% | Cost (%) | Benefit(%) | | | | |
| | | | -20 | -10 | 0 | 10 | 20 |
| 1)NPV OF COST (EIRR%) | 227 | -20 | 30.45% | 33.57% | 36.58% | 39.49% | 42.31% |
| | | -10 | 27.65% | 30.45% | 33.23% | 35.92% | 38.53% |
| 2)NPV OF BENEFIT (EIRR%) | 238 | 0 | 25.17% | 27.86% | 30.45% | 32.96% | 35.39% |
| | | 10 | 23.15% | 25.67% | 28.10% | 30.45% | 32.73% |
| 3)B-C(10%), million peso | 1,090 | 20 | 21.42% | 23.79% | 26.08% | 28.30% | 30.45% |
| 4)B/C(10%) | 3.811 | | | | | | |

(Unit : MILLION PESOS)

| Year in Order | Year | Costs | | | Gross Benefit (B) | Balance (B-C) |
|---------------|------|-------------------|-----|-----------|-------------------|---------------|
| | | Const- ruction | O&M | Total (C) | | |
| 1 | 1993 | 152 | 0 | 152 | 0 | -152 |
| 2 | 1994 | 331 | 1 | 332 | 17 | -315 |
| 3 | 1995 | 250 | 4 | 254 | 72 | -182 |
| 4 | 1996 | 85 | 8 | 93 | 163 | 70 |
| 5 | 1997 | 24 | 13 | 37 | 255 | 218 |
| 6 | 1998 | 1 | 16 | 17 | 307 | 290 |
| 7 | 1999 | 0 | 17 | 17 | 321 | 304 |
| 8 | 2000 | 0 | 17 | 17 | 324 | 307 |
| 9 | 2001 | 0 | 17 | 17 | 324 | 307 |
| 10 | 2002 | 0 | 17 | 17 | 324 | 307 |
| 11 | 2003 | 0 | 17 | 17 | 324 | 307 |
| : | | | | | | |
| 50 | 2042 | 0 | 17 | 17 | 324 | 307 |

| ECONOMIC INTERNAL RATE OF RETURN | | SENSITIVITY DATA | | | | | |
|----------------------------------|--------|------------------|------------|--------|--------|--------|--------|
| EIRR | 28.31% | Cost (%) | Benefit(%) | | | | |
| | | | -20 | -10 | 0 | 10 | 20 |
| 1)NPV OF COST (EIRR%) | 476 | -20 | 28.31% | 31.36% | 34.31% | 37.18% | 39.98% |
| | | -10 | 25.51% | 28.31% | 31.02% | 33.66% | 36.23% |
| 2)NPV OF BENEFIT (EIRR%) | 503 | 0 | 23.21% | 25.80% | 28.31% | 30.76% | 33.14% |
| | | 10 | 21.27% | 23.69% | 26.03% | 28.31% | 30.54% |
| 3)B-C(10%), million peso | 1,638 | 20 | 19.62% | 21.88% | 24.08% | 26.22% | 28.31% |
| 4)B/C(10%) | 3.433 | | | | | | |

**ECONOMIN COST AND BENEFIT FLOW
(10 YEAR PROGRAM)**

Table 11-06

I. CISOs and CIPs (Unit: MILLION PESOS)

| Year in Order | Year | Const- ruction | Costs O&M | Total (C) | Gross Benefit (B) | Balance (B-C) |
|---------------|------|-------------------|--------------|--------------|-------------------------|------------------|
| 1 | 1993 | 275 | 0 | 275 | 0 | -275 |
| 2 | 1994 | 535 | 1 | 536 | 22 | -514 |
| 3 | 1995 | 1,224 | 5 | 1,229 | 92 | -1,137 |
| 4 | 1996 | 1,903 | 15 | 1,918 | 279 | -1,639 |
| 5 | 1997 | 1,973 | 38 | 2,011 | 691 | -1,320 |
| 6 | 1998 | 2,003 | 70 | 2,073 | 1,305 | -768 |
| 7 | 1999 | 2,041 | 109 | 2,150 | 2,032 | -118 |
| 8 | 2000 | 2,042 | 149 | 2,191 | 2,773 | 582 |
| 9 | 2001 | 1,895 | 192 | 2,087 | 3,540 | 1,453 |
| 10 | 2002 | 980 | 233 | 1,213 | 4,320 | 3,107 |
| 11 | 2003 | 0 | 269 | 269 | 4,976 | 4,707 |
| 12 | 2004 | 0 | 291 | 291 | 5,383 | 5,092 |
| 13 | 2005 | 0 | 298 | 298 | 5,507 | 5,209 |
| ... | | | | | | |
| 50 | 2042 | 0 | 298 | 298 | 5,507 | 5,209 |

ECONOMIC INTERNAL RATE OF RETURN

| | |
|---------------------------|---------------|
| EIRR | 26.66% |
| 1) NPV OF COST (EIRR%) | 3,999 |
| 2) NPV OF BENEFIT (EIRR%) | 4,227 |
| 3) B-C(10%), million peso | 19,035 |
| 4) B/C(10%) | 3.253 |

SENSITIVITY DATA

| Cost (%) | Benefit(%) | | | | |
|----------|------------|--------|--------|--------|--------|
| | -20 | -10 | 0 | 10 | 20 |
| -20 | 26.66% | 29.47% | 32.17% | 37.49% | 37.32% |
| -10 | 24.08% | 26.66% | 29.16% | 31.58% | 33.92% |
| 0 | 21.93% | 24.34% | 26.66% | 28.91% | 31.10% |
| 10 | 20.13% | 22.38% | 24.55% | 26.66% | 28.71% |
| 20 | 18.58% | 20.76% | 22.74% | 24.73% | 26.66% |

II. CISOs (Unit: MILLION PESOS)

| Year in Order | Year | Const- ruction | Costs O&M | Total (C) | Gross Benefit (B) | Balance (B-C) |
|---------------|------|-------------------|--------------|--------------|-------------------------|------------------|
| 1 | 1993 | 82 | 0 | 82 | 0 | -82 |
| 2 | 1994 | 134 | 0 | 134 | 5 | -129 |
| 3 | 1995 | 289 | 1 | 290 | 20 | -270 |
| 4 | 1996 | 430 | 3 | 433 | 55 | -378 |
| 5 | 1997 | 438 | 8 | 446 | 145 | -301 |
| 6 | 1998 | 451 | 15 | 466 | 285 | -181 |
| 7 | 1999 | 444 | 24 | 468 | 453 | -15 |
| 8 | 2000 | 396 | 33 | 429 | 622 | 193 |
| 9 | 2001 | 367 | 43 | 410 | 791 | 381 |
| 10 | 2002 | 210 | 51 | 261 | 956 | 695 |
| 11 | 2003 | 0 | 59 | 59 | 1,096 | 1,037 |
| 12 | 2004 | 0 | 64 | 64 | 1,184 | 1,120 |
| 13 | 2005 | 0 | 65 | 65 | 1,206 | 1,141 |
| ... | | | | | | |
| 50 | 2042 | 0 | 65 | 65 | 1,206 | 1,141 |

ECONOMIC INTERNAL RATE OF RETURN

| | |
|---------------------------|---------------|
| EIRR | 25.96% |
| 1) NPV OF COST (EIRR%) | 934 |
| 2) NPV OF BENEFIT (EIRR%) | 986 |
| 3) B-C(10%), million peso | 4,164 |
| 4) B/C(10%) | 3.224 |

SENSITIVITY DATA

| Cost (%) | Benefit(%) | | | | |
|----------|------------|--------|--------|--------|--------|
| | -20 | -10 | 0 | 10 | 20 |
| -20 | 25.96% | 28.60% | 31.14% | 33.58% | 35.94% |
| -10 | 23.51% | 25.96% | 28.32% | 30.59% | 32.78% |
| 0 | 21.47% | 23.76% | 25.96% | 28.08% | 30.14% |
| 10 | 19.74% | 21.89% | 23.96% | 25.96% | 27.89% |
| 20 | 18.26% | 20.29% | 22.24% | 24.13% | 25.96% |

III. CIPs (Unit: MILLION PESOS)

| Year in Order | Year | Const- ruction | Costs O&M | Total (C) | Gross Benefit (B) | Balance (B-C) |
|---------------|------|-------------------|--------------|--------------|-------------------------|------------------|
| 1 | 1993 | 193 | 0 | 193 | 0 | -193 |
| 2 | 1994 | 401 | 1 | 402 | 17 | -385 |
| 3 | 1995 | 935 | 4 | 939 | 72 | -867 |
| 4 | 1996 | 1,473 | 12 | 1,485 | 224 | -1,261 |
| 5 | 1997 | 1,535 | 30 | 1,565 | 546 | -1,019 |
| 6 | 1998 | 1,552 | 55 | 1,607 | 1,020 | -587 |
| 7 | 1999 | 1,597 | 85 | 1,682 | 1,579 | -103 |
| 8 | 2000 | 1,646 | 116 | 1,762 | 2,151 | 389 |
| 9 | 2001 | 1,528 | 149 | 1,677 | 2,749 | 1,072 |
| 10 | 2002 | 770 | 182 | 952 | 3,364 | 2,412 |
| 11 | 2003 | 0 | 210 | 210 | 3,880 | 3,670 |
| 12 | 2004 | 0 | 227 | 227 | 4,199 | 3,972 |
| 13 | 2005 | 0 | 233 | 233 | 4,301 | 4,068 |
| ... | | | | | | |
| 50 | 2042 | 0 | 233 | 233 | 4,301 | 4,068 |

ECONOMIC INTERNAL RATE OF RETURN

| | |
|---------------------------|---------------|
| EIRR | 26.88% |
| 1) NPV OF COST (EIRR%) | 3,064 |
| 2) NPV OF BENEFIT (EIRR%) | 3,239 |
| 3) B-C(10%), million peso | 14,871 |
| 4) B/C(10%) | 3.261 |

SENSITIVITY DATA

| Cost (%) | Benefit(%) | | | | |
|----------|------------|--------|--------|--------|--------|
| | -20 | -10 | 0 | 10 | 20 |
| -20 | 26.88% | 29.73% | 32.49% | 35.16% | 37.76% |
| -10 | 24.25% | 26.88% | 29.42% | 31.88% | 34.28% |
| 0 | 22.07% | 24.51% | 26.88% | 29.17% | 31.40% |
| 10 | 20.24% | 22.52% | 24.73% | 26.88% | 28.96% |
| 20 | 18.68% | 20.82% | 22.90% | 24.91% | 26.88% |

Table 11-07

NET FARM INCOME PER HA UNDER WITHOUT AND WITH PROJECT CONDITIONS

I. Without Project Condition

| Items | Irrigated | | | | | | | | | | | | | | |
|-----------------------------|---------------------|----------------------|-------------------|-------|----------------|----------------------|-------------------|--------|----------------|----------------------|-------------------|--------|----------------|--------|--|
| | Rainfed | | | | | Wet Season | | | | | Dry Season | | | | |
| | Unit Yield (ton/ha) | Cultivated Area (ha) | Unit Price (peso) | Q'ty | Amount (pesos) | Cultivated Area (ha) | Unit Price (peso) | Q'ty | Amount (pesos) | Cultivated Area (ha) | Unit Price (peso) | Q'ty | Amount (pesos) | | |
| I. Gross Farm Income | | | | | | | | | | | | | | | |
| 1.1 Irrigated Paddy | | | | | | | | | | | | | | | |
| a) Wet Season | ton | 3.6 | 0.0 | 4,920 | 0 | 1.0 | 4,920 | 17,712 | | 0.0 | 4,920 | 0 | | | |
| b) Dry Season | ton | 3.6 | 0.0 | 4,920 | 0 | 0.0 | 4,920 | 0 | | 1.0 | 4,920 | 17,712 | | | |
| 1.2 Rainfed Paddy | ton | 2.7 | 1.0 | 4,920 | 13,284 | 0.0 | 4,920 | 0 | | 0.0 | 4,920 | 0 | | | |
| | | | | | 13,284 | | | 17,712 | | | | 17,712 | | | |
| II. Production Cost | | | | | | | | | | | | | | | |
| 2.1 Seed | kg | | | 5 | 100 | 500 | | 5 | 80 | 400 | | 5 | 80 | 400 | |
| 2.2 Fertilizer | | | | | | | | | | | | | | | |
| a) N | kg | | | 15 | 55 | 825 | | 15 | 73 | 1,095 | | 15 | 73 | 1,095 | |
| b) P2O5 | kg | | | 17 | 14 | 238 | | 17 | 28 | 476 | | 17 | 28 | 476 | |
| c) K2O | kg | | | 8 | 0 | 0 | | 8 | 28 | 224 | | 8 | 28 | 224 | |
| 2.3 Agro-chemicals | lit. | | | 368 | 1.8 | 662 | | 368 | 3 | 1,104 | | 368 | 3 | 1,104 | |
| 2.4 Hired Labor | man-day | | | 45 | 43 | 1,935 | | 45 | 47 | 2,115 | | 45 | 47 | 2,115 | |
| 2.5 Hired Animal | day | | | 54 | 8 | 432 | | 54 | 8 | 432 | | 54 | 8 | 432 | |
| 2.6 Machinery | L.S. | | | - | 0 | 266 | | - | - | 354 | | - | - | 354 | |
| 2.7 Interest | L.S. | | | - | - | 339 | | - | - | 339 | | - | - | 339 | |
| 2.8 Land Tax | L.S. | | | - | - | 45 | | - | - | 45 | | - | - | 45 | |
| 2.9 Land Rent | L.S. | | | - | - | 586 | | - | - | 586 | | - | - | 586 | |
| 2.10 Others | L.S. | | | - | - | 133 | | - | - | 177 | | - | - | 177 | |
| Sub-Total | | | | | | 5,961 | | | | 7,347 | | | | 7,347 | |
| III. O & M Costs | | | | | | | | | | | | | | | |
| | | | | | | 0 | | | | 150 | | | | 150 | |
| IV. Amortization Fee | | | | | | | | | | | | | | | |
| | | | | | | 0 | | | | 0 | | | | 0 | |
| V. Net Farm Income | | | | | | | | | | | | | | | |
| | | | | | | 7,323 | | | | 10,215 | | | | 10,215 | |

II. With Project Condition

| Items | Irrigated | | | | | | | | | | | | | | |
|-----------------------------|---------------------|----------------------|-------------------|-------|----------------|----------------------|-------------------|--------|----------------|----------------------|----------------------|--------|----------------|-------|--|
| | Rainfed | | | | | CIS (Wet/Dry Season) | | | | | CIP (Wet/Dry Season) | | | | |
| | Unit Yield (ton/ha) | Cultivated Area (ha) | Unit Price (peso) | Q'ty | Amount (pesos) | Cultivated Area (ha) | Unit Price (peso) | Q'ty | Amount (pesos) | Cultivated Area (ha) | Unit Price (peso) | Q'ty | Amount (pesos) | | |
| I. Gross Farm Income | | | | | | | | | | | | | | | |
| 1.1 Irrigated Paddy | ton | 3.6 | 0.0 | 4,920 | 0 | 1.0 | 4,920 | 17,712 | | 1.0 | 4,920 | 17,712 | | | |
| 1.2 Rainfed Paddy | ton | 2.7 | 1.0 | 4,920 | 13,284 | 0.0 | 4,920 | 0 | | 0.0 | 4,920 | 0 | | | |
| | | | | | 13,284 | | | 17,712 | | | | 17,712 | | | |
| II. Production Cost | | | | | | | | | | | | | | | |
| 2.1 Seed | kg | | | 5 | 100 | 500 | | 10 | 50 | 500 | | 10 | 50 | 500 | |
| 2.2 Fertilizer | | | | | | | | | | | | | | | |
| a) N | kg | | | 15 | 55 | 825 | | 15 | 73 | 1,095 | | 15 | 73 | 1,095 | |
| b) P2O5 | kg | | | 17 | 14 | 238 | | 17 | 28 | 476 | | 17 | 28 | 476 | |
| c) K2O | kg | | | 8 | 0 | 0 | | 8 | 28 | 224 | | 8 | 28 | 224 | |
| 2.3 Agro-chemicals | lit. | | | 368 | 1.8 | 662 | | 368 | 3 | 1,104 | | 368 | 3 | 1,104 | |
| 2.4 Hired Labor | man-day | | | 45 | 43 | 1,935 | | 45 | 47 | 2,115 | | 45 | 47 | 2,115 | |
| 2.5 Hired Animal | day | | | 54 | 8 | 432 | | 54 | 8 | 432 | | 54 | 8 | 432 | |
| 2.6 Machinery | L.S. | | | - | 0 | 266 | | - | - | 354 | | - | - | 354 | |
| 2.7 Interest | L.S. | | | - | - | 339 | | - | - | 362 | | - | - | 362 | |
| 2.8 Land Tax | L.S. | | | - | - | 45 | | - | - | 45 | | - | - | 45 | |
| 2.9 Land Rent | L.S. | | | - | - | 586 | | - | - | 586 | | - | - | 586 | |
| 2.10 Others | L.S. | | | - | - | 133 | | - | - | 177 | | - | - | 177 | |
| Sub-Total | | | | | | 5,961 | | | | 7,470 | | | | 7,470 | |
| III. O & M Costs | | | | | | | | | | | | | | | |
| | | | | | | 0 | | | | 334 | | | | 334 | |
| IV. Amortization Fee | | | | | | | | | | | | | | | |
| | | | | | | 0 | | | | 73 | | | | 300 | |
| V. Net Farm Income | | | | | | | | | | | | | | | |
| | | | | | | 7,323 | | | | 9,835 | | | | 9,608 | |

FARM BUDGET OF THE REPRESENTATIVE FARM MODELS FOR CIS

I. Without Project Condition

| Items | Unit Amount (peso/ha) | Small (0.50 ha) | | Average (1.25 ha) | | Large (2.00 ha) | |
|--------------------------------|-----------------------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| | | Cultivated Area (ha) | Total Amount (peso) | Cultivated Area (ha) | Total Amount (peso) | Cultivated Area (ha) | Total Amount (peso) |
| 1. Gross Farm Income | | | | | | | |
| 1) Irrigated Paddy | | | | | | | |
| a. Wet Season | 17,712 | 0.38 | 6,731 | 0.95 | 16,826 | 1.52 | 26,922 |
| b. Dry Season | 17,712 | 0.31 | 5,491 | 0.78 | 13,727 | 1.24 | 21,963 |
| 2) Rainfed Paddy | 13,284 | 0.12 | 1,594 | 0.30 | 3,985 | 0.48 | 6,376 |
| sub-total | | | 13,816 | | 34,538 | | 55,261 |
| 2. Crop Production Cost | | | | | | | |
| 1) Irrigated Paddy | | | | | | | |
| a. Wet Season | 7,347 | 0.38 | 2,792 | 0.95 | 6,980 | 1.52 | 11,167 |
| b. Dry Season | 7,347 | 0.31 | 2,278 | 0.78 | 5,694 | 1.24 | 9,110 |
| 2) Rainfed Paddy | 5,961 | 0.12 | 715 | 0.30 | 1,788 | 0.48 | 2,861 |
| sub-total | | | 5,785 | | 14,462 | | 23,138 |
| 3. O & M Costs | | | | | | | |
| 1) Irrigated Paddy | 150 | 0.69 | 104 | 1.73 | 259 | 2.76 | 414 |
| 2) Rainfed Paddy | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| sub-total | | | 104 | | 259 | | 414 |
| 4. Amortization Costs | | | | | | | |
| 1) Irrigated Paddy | 0 | 0.69 | 0 | 1.73 | 0 | 2.76 | 0 |
| 2) Rainfed Paddy | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| sub-total | | | 0 | | 0 | | 0 |
| 5. Living Expenses | | | 24,000 | | 24,000 | | 24,000 |
| 6. Net Farm Reserve | | | -16,073 | | -4,183 | | 7,709 |

II. With Project Condition

| Items | Unit Amount (peso/ha) | Small (0.50 ha) | | Average (1.25 ha) | | Large (2.00 ha) | |
|--------------------------------|-----------------------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| | | Cultivated Area (ha) | Total Amount (peso) | Cultivated Area (ha) | Total Amount (peso) | Cultivated Area (ha) | Total Amount (peso) |
| 1. Gross Farm Income | | | | | | | |
| 1) Irrigated Paddy | | | | | | | |
| a. Wet Season | 17,712 | 0.50 | 8,856 | 1.25 | 22,140 | 2.00 | 35,424 |
| b. Dry Season | 17,712 | 0.45 | 7,970 | 1.13 | 19,926 | 1.80 | 31,882 |
| 2) Rainfed Paddy | 13,284 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| sub-total | | | 16,826 | | 42,066 | | 67,306 |
| 2. Crop Production Cost | | | | | | | |
| 1) Irrigated Paddy | | | | | | | |
| a. Wet Season | 7,470 | 0.50 | 3,735 | 1.25 | 9,338 | 2.00 | 14,940 |
| b. Dry Season | 7,470 | 0.45 | 3,362 | 1.13 | 8,404 | 1.80 | 13,446 |
| 2) Rainfed Paddy | 5,961 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| sub-total | | | 7,097 | | 17,742 | | 28,386 |
| 3. O & M Costs | | | | | | | |
| 1) Irrigated Paddy | 334 | 0.95 | 317 | 2.38 | 793 | 3.80 | 1,269 |
| 2) Rainfed Paddy | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| sub-total | | | 317 | | 793 | | 1,269 |
| 4. Amortization Costs | | | | | | | |
| 1) Irrigated Paddy | 73 | 0.95 | 69 | 2.38 | 173 | 3.80 | 277 |
| 2) Rainfed Paddy | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| sub-total | | | 69 | | 173 | | 277 |
| 5. Living Expenses | | | 24,000 | | 24,000 | | 24,000 |
| 6. Net Farm Reserve | | | -14,657 | | -642 | | 13,374 |

Table 11-09

FARM BUDGET OF THE REPRESENTATIVE FARM MODELS FOR CIP

I. Without Project Condition

| Items | Unit Amount (peso/ha) | Small (0.50 ha) | | Average (1.50 ha) | | Large (2.00 ha) | |
|--------------------------------|-----------------------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| | | Cultivated Area (ha) | Total Amount (peso) | Cultivated Area (ha) | Total Amount (peso) | Cultivated Area (ha) | Total Amount (peso) |
| 1. Gross Farm Income | | | | | | | |
| 1) Irrigated Paddy | | | | | | | |
| a. Wet Season | 17,712 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| b. Dry Season | 17,712 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| 2) Rainfed Paddy | 13,284 | 0.50 | 6,642 | 1.50 | 19,926 | 2.00 | 26,568 |
| sub-total | | | 6,642 | | 19,926 | | 26,568 |
| 2. Crop Production Cost | | | | | | | |
| 1) Irrigated Paddy | | | | | | | |
| a. Wet Season | 7,347 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| b. Dry Season | 7,347 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| 2) Rainfed Paddy | 5,961 | 0.50 | 2,981 | 1.50 | 8,942 | 2.00 | 11,922 |
| sub-total | | | 2,981 | | 8,942 | | 11,922 |
| 3. O & M Costs | | | | | | | |
| 1) Irrigated Paddy | 150 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| 2) Rainfed Paddy | 0 | 0.50 | 0 | 1.50 | 0 | 2.00 | 0 |
| sub-total | | | 0 | | 0 | | 0 |
| 4. Amortization Costs | | | | | | | |
| 1) Irrigated Paddy | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| 2) Rainfed Paddy | 0 | 2.00 | 0 | 2.00 | 0 | 2.00 | 0 |
| sub-total | | | 0 | | 0 | | 0 |
| 5. Living Expenses | | | 24,000 | | 24,000 | | 24,000 |
| 6. Net Farm Reserve | | | -20,339 | | -13,016 | | -9,354 |

II. With Project Condition

| Items | Unit Amount (peso/ha) | Small (0.50 ha) | | Average (1.50 ha) | | Large (2.00 ha) | |
|--------------------------------|-----------------------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| | | Cultivated Area (ha) | Total Amount (peso) | Cultivated Area (ha) | Total Amount (peso) | Cultivated Area (ha) | Total Amount (peso) |
| 1. Gross Farm Income | | | | | | | |
| 1) Irrigated Paddy | | | | | | | |
| a. Wet Season | 17,712 | 0.50 | 8,856 | 1.50 | 26,568 | 2.00 | 35,424 |
| b. Dry Season | 17,712 | 0.45 | 7,970 | 1.35 | 23,911 | 1.80 | 31,882 |
| 2) Rainfed Paddy | 13,284 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| sub-total | | | 16,826 | | 50,479 | | 67,306 |
| 2. Crop Production Cost | | | | | | | |
| 1) Irrigated Paddy | | | | | | | |
| a. Wet Season | 7,470 | 0.50 | 3,735 | 1.50 | 11,205 | 2.00 | 14,940 |
| b. Dry Season | 7,470 | 0.45 | 3,362 | 1.35 | 10,085 | 1.80 | 13,446 |
| 2) Rainfed Paddy | 5,961 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| sub-total | | | 7,097 | | 21,290 | | 28,386 |
| 3. O & M Costs | | | | | | | |
| 1) Irrigated Paddy | 334 | 0.95 | 317 | 2.85 | 952 | 3.80 | 1,269 |
| 2) Rainfed Paddy | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| sub-total | | | 317 | | 952 | | 1,269 |
| 4. Amortization Costs | | | | | | | |
| 1) Irrigated Paddy | 600 | 0.95 | 285 | 2.85 | 855 | 3.80 | 1,140 |
| 2) Rainfed Paddy | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| sub-total | | | 285 | | 855 | | 1,140 |
| 5. Living Expenses | | | 24,000 | | 24,000 | | 24,000 |
| 6. Net Farm Reserve | | | -14,873 | | 3,382 | | 12,511 |

Table 11-10

SUPPLY AND DEMAND OF RICE

Rice: Supply and Demand Situations (1980-1989)

(Unit: '000 tons)

| Year | Beginning Stock | Production | Net Import | Total Supply | Food Use | | Other Uses | Total Demand | Ending Stock |
|------|-----------------|------------|------------|--------------|----------|-----------------|------------|--------------|--------------|
| | | | | | Total | Per Capita (kg) | | | |
| 1980 | 1,885 | 4,801 | -261 | 6,425 | 4,467 | 92.9 | 312 | 4,779 | 1,646 |
| 1981 | 1,646 | 4,975 | -82 | 6,539 | 4,605 | 93.0 | 323 | 4,928 | 1,611 |
| 1982 | 1,611 | 5,270 | -1 | 6,880 | 4,671 | 92.0 | 343 | 5,014 | 1,866 |
| 1983 | 1,866 | 4,621 | -40 | 6,447 | 4,655 | 89.4 | 300 | 4,956 | 1,491 |
| 1984 | 1,491 | 4,965 | 187 | 6,643 | 5,173 | 97.0 | 323 | 5,496 | 1,147 |
| 1985 | 1,147 | 5,597 | 538 | 7,282 | 5,163 | 94.4 | 364 | 5,527 | 1,755 |
| 1986 | 1,755 | 5,887 | 2 | 7,644 | 5,245 | 93.3 | 382 | 5,627 | 2,017 |
| 1987 | 2,017 | 5,396 | -112 | 7,301 | 5,371 | 93.2 | 350 | 5,721 | 1,580 |
| 1988 | 1,580 | 5,667 | 119 | 7,366 | 5,480 | 92.7 | 368 | 5,848 | 1,558 |
| 1989 | 1,518 | 6,186 | 220 | 7,924 | 5,881 | 97.9 | 402 | 6,454 | 1,470 |

Source: Bureau of Agricultural Statistics, Department of Agriculture

Rice: Supply and Demand Forecast

| Year | Cultivated Area ('000 ha) | Unit Yield (tons/ha) | Paddy Production ('000 tons) | Seeds & Wastes ('000 tons) | Rice Production ('000 tons) | Population (million) | Per capita Demand (kg) | Total Demand ('000 tons) | Balance ('000 tons) |
|------|---------------------------|----------------------|------------------------------|----------------------------|-----------------------------|----------------------|------------------------|--------------------------|---------------------|
| 1990 | 3,339 | 2.83 | 9,457 | 898 | 5,734 | 61.48 | 98.12 | 6,032 | -298 |
| 1991 | 3,352 | 2.96 | 9,907 | 941 | 6,007 | 62.87 | 98.55 | 6,196 | -189 |
| 1992 | 3,370 | 3.05 | 10,290 | 978 | 6,239 | 64.26 | 98.99 | 6,361 | -122 |
| 1993 | 3,378 | 3.13 | 10,562 | 1,003 | 6,404 | 65.65 | 99.42 | 6,527 | -123 |
| 1994 | 3,398 | 3.20 | 10,879 | 1,034 | 6,596 | 67.04 | 99.86 | 6,695 | -98 |
| 1995 | 3,401 | 3.31 | 11,251 | 1,069 | 6,822 | 68.42 | 100.30 | 6,863 | -40 |
| 1996 | 3,412 | 3.41 | 11,630 | 1,105 | 7,052 | 69.80 | 100.74 | 7,032 | 20 |
| 1997 | 3,423 | 3.52 | 12,036 | 1,143 | 7,298 | 71.17 | 101.18 | 7,201 | 97 |
| 1998 | 3,442 | 3.63 | 12,484 | 1,186 | 7,570 | 72.54 | 101.63 | 7,372 | 197 |
| 1999 | 3,464 | 3.75 | 12,977 | 1,233 | 7,869 | 73.89 | 102.07 | 7,542 | 327 |
| 2000 | 3,489 | 3.84 | 13,409 | 1,274 | 8,131 | 75.22 | 102.52 | 7,712 | 419 |
| 2001 | 3,603 | 3.94 | 14,196 | 1,349 | 8,608 | 76.54 | 102.97 | 7,881 | 726 |
| 2002 | 3,706 | 4.04 | 14,972 | 1,422 | 9,078 | 77.84 | 103.42 | 8,050 | 1,028 |
| 2003 | 3,810 | 4.16 | 15,850 | 1,506 | 9,610 | 79.12 | 103.83 | 8,215 | 1,395 |
| 2004 | 3,916 | 4.28 | 16,760 | 1,592 | 10,163 | 80.37 | 104.25 | 8,379 | 1,784 |
| 2005 | 4,026 | 4.41 | 17,755 | 1,687 | 10,766 | 81.59 | 104.67 | 8,540 | 2,226 |

Source: Corporate Plan: 1990-2000, National Irrigation Administration (NIA)

**PROJECTED LABOR FORCE, UNEMPLOYMENT RATE
AND JOBS TO BE CREATED**

(Unit: thousand)

| Year | Labor | | Unemployment | Target | Target Jobs to be |
|------|--------|------------|--------------|--------------|-------------------|
| | Force | Employment | | Unemployment | Created to Reduce |
| | | | | Rate (%) | Unemployment |
| 1990 | 24,970 | 22,698 | 2,272 | 9.1 | 790 |
| 1991 | 25,844 | 23,621 | 2,223 | 8.6 | 923 |
| 1992 | 26,749 | 24,609 | 2,140 | 8.0 | 988 |
| 1993 | 27,685 | 25,664 | 2,021 | 7.3 | 1,055 |
| 1994 | 28,654 | 26,820 | 1,834 | 6.4 | 1,156 |
| 1995 | 29,657 | 28,085 | 1,572 | 5.3 | 1,265 |
| 1996 | 30,695 | 29,406 | 1,289 | 4.2 | 1,321 |
| 1997 | 31,769 | 30,816 | 953 | 3.0 | 1,410 |
| 1998 | 32,881 | 31,960 | 921 | 2.8 | 1,531 |
| 1999 | 34,032 | 33,147 | 885 | 2.6 | 1,663 |
| 2000 | 35,189 | 34,345 | 844 | 2.4 | 1,806 |
| 2001 | 36,413 | 35,612 | 801 | 2.2 | 1,961 |
| 2002 | 37,680 | 36,926 | 754 | 2.0 | 2,130 |

Source: 1990-1997 Projections based on the data from National Statistics Office,
Institute of Labor Studies and Bureau of Labor and Employment Statistics;
1998-2002 Projections based on 1990-1997 Projections.

CALCULATION OF DOMESTIC RESOURCE COST

Table 11-12

| Year | Foreign Exchange Component | | | | Domestic Currency Component | | |
|------|---------------------------------------|-----------------------------------|-----------------------------------|--------------------------------------|-----------------------------------|-----------------------------------|------------------------------------|
| | Value of Production (million US\$) | Investment Cost (million US\$) | Production Cost (million US\$) | Incremental Saving (million US\$) | Investment Cost (million peso) | Production Cost (million peso) | Incremental Cost (million peso) |
| 1993 | 515 | 4 | 88 | 423 | 515 | 3,231 | 3,746 |
| 1994 | 516 | 7 | 88 | 421 | 516 | 3,237 | 3,753 |
| 1995 | 520 | 16 | 89 | 414 | 520 | 3,261 | 3,780 |
| 1996 | 532 | 26 | 91 | 415 | 532 | 3,337 | 3,868 |
| 1997 | 558 | 27 | 96 | 436 | 558 | 3,505 | 4,064 |
| 1998 | 595 | 27 | 102 | 466 | 595 | 3,738 | 4,332 |
| 1999 | 638 | 27 | 109 | 501 | 638 | 4,012 | 4,650 |
| 2000 | 681 | 27 | 117 | 537 | 681 | 4,287 | 4,968 |
| 2001 | 727 | 25 | 125 | 577 | 727 | 4,582 | 5,310 |
| 2002 | 774 | 13 | 133 | 628 | 774 | 4,878 | 5,652 |
| 2003 | 814 | 0 | 140 | 674 | 814 | 5,131 | 5,945 |
| 2004 | 840 | 0 | 145 | 696 | 840 | 5,300 | 6,140 |
| 2005 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2006 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2007 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2008 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2009 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2010 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2011 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2012 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2013 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2014 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2015 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2016 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2017 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2018 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2019 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2020 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2021 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2022 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2023 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2024 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2025 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2026 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2027 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2028 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2029 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2030 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2031 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2032 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2033 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2034 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2035 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2036 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2037 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2038 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2039 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2040 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2041 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |
| 2042 | 849 | 0 | 146 | 703 | 849 | 5,342 | 6,191 |

Note:

- 1) Present worth of net foreign exchange saving = 3,443 millions of US \$
- 2) Present worth of domestic currency cost of realizing foreign exchange saving = 31,980 millions of pesos
- 3) Domestic resource cost = 9.29 peso=1.0 US\$

**POVERTY THRESHOLD IN THE PHILIPPINES BY REGION
1985, 1988 AND 1991**

| Region | 1985 | | 1988 | | Annual Average | 1991 |
|-------------------------------|-----------------------------|--------------------|-----------------------------|--------------------|--|-----------------------------|
| | Poverty | Poverty | Poverty | Poverty | Increase Ratio | Poverty |
| | Threshold (peso/month)<1 | Incidence (%)<2 | Threshold (peso/month)<1 | Incidence (%)<2 | (%) of Poverty Threshold (1985-88) | Threshold (peso/month)<3 |
| Philippines | 2,381 | 59.0 | 2,709 | 49.5 | 4.4 | 3,083 |
| NCR | 3,282 | 43.9 | 4,037 | 31.8 | 7.1 | 4,959 |
| Region I (Ilocos) | 2,389 | 51.6 | 2,597 | 47.5 | 2.8 | 2,821 |
| Region II (Cagayan Valley) | 2,201 | 55.7 | 2,576 | 48.9 | 5.4 | 3,016 |
| Region III (Central Luzon) | 2,552 | 43.5 | 2,881 | 39.6 | 4.1 | 3,250 |
| Region IV (Southern Tagalog) | 2,471 | 55.2 | 2,832 | 49.3 | 4.7 | 3,250 |
| Region V (Bicol) | 2,143 | 73.5 | 2,443 | 65.3 | 4.5 | 2,788 |
| Region VI (Western Visayas) | 2,453 | 73.4 | 2,654 | 61.8 | 2.7 | 2,875 |
| Region VII (Central Visayas) | 1,987 | 69.9 | 2,173 | 54.6 | 3.0 | 2,374 |
| Region VIII (Eastern Visayas) | 2,015 | 70.2 | 2,263 | 60.5 | 3.9 | 2,538 |
| Region IX (Western Mindanao) | 2,119 | 63.0 | 2,289 | 52.0 | 2.6 | 2,472 |
| Region X (Northern Mindanao) | 2,249 | 65.6 | 2,439 | 51.5 | 2.7 | 2,642 |
| Region XI (Central Mindanao) | 2,389 | 60.2 | 2,763 | 52.2 | 5.0 | 3,199 |
| Region XII (Central Mindanao) | 2,212 | 63.6 | 2,468 | 47.1 | 3.7 | 2,752 |

- Notes: <1 Minimum average monthly income that a family of 6 members should receive to be considered above poverty. For 1988, the poverty threshold levels were derived using 1985 levels inflated to 1988 prices.
- <2 Proportion of families below poverty level.
- <3 Estimated by applying the annual average increase ratio of poverty threshold (1985-1988).

Source: 1985 FIES Final results and 1988 FIES preliminary results.

SUMMARY RECOMMENDATIONS ON INSTITUTIONAL DEVELOPMENT (1/3)

| Classification | Short-run Period | Medium/Long-run Period |
|--|--|---|
| <p>Central Office: Provincial and Regional Irrigation Offices (PIOs/RIOs):</p> | <p>(1) Provide a periodical adjustment in the limit of authority of the PIFs to procure spare parts for equipment and vehicles based on current market prices;</p> <p>(2) Ensure a better coordination of activities and cultivate more rapport among project preparation staff (engineer, economist), project-in-charge (construction) and IDOs;</p> <p>(3) Conduct a periodical assessment, among field offices including the IAs, of the workability of the General Guidelines on CIDP Implementation;</p> <p>(4) Further coordinate the activities of ITs with those of IDOs to maximize extent of services to IAs;</p> <p>(5) On monitoring and evaluation, define clearly the areas or sectors to be emphasized and the criteria to be assessed, as well as involve the IAs and provide for a multi-lateral insights in the process;</p> <p>(6) Increase the manpower complement equivalent to October, 1990 level, i.e., prior to the substantive lay-off of personnel due to government austerity measures;</p> <p>(7) Fill-up vacant technical positions in PIOs like engineers, economists, and institutional development officers and irrigation technicians based on urgent requirements; give utmost priority to the recruitment of those NIA personnel who have been temporarily laid off;</p> | <p>(1) Strongly pursue the establishment of a Communal Irrigation Department which shall over-see the planning, implementation, and O&M (including continuous inventory) of CISOs and CIPs;</p> <p>(2) Provide this department with an adequate number of qualified (academic and experience-wise) and appropriately trained staff personnel;</p> <p>(3) Establish a computerized database system for CISOs and CIPs at the central office which, in the long-run, shall be hooked up with the RIOs and PIOs;</p> <p>(4) Gradually increase the participation or authority of the PIOs/RIOs in the bidding and packaging of the sub-project and other activities relative to project implementation;</p> <p>(5) Provide the PIOs/RIOs with authority to approve project contract as a whole depending on project cost, size of project area and/or nature of funding;</p> <p>(6) Gather a multi-sectoral insights on the participatory approach by conducting a regular forum to be attended by representatives from concerned government and private sectors;</p> <p>(7) Train Farmer Irrigators Organizers (FIOs) from among the IAs to support IDOs' role in developing the IAs;</p> |
| <p>Staffing, Training and Incentives</p> | <p>(8) Raise the number of personnel requirement to the short-run period plus filling-up of the vacant but approved permanent positions as of October, 1990, including non-permanent positions under various new projects;</p> <p>(9) Increase the training ratio of PIO personnel from 0.6 to at least one and prevent the RIO's current training ratio of 1.4 from falling below one; this means enrolling each PIO and RIO staff to a least one training slot over the long-run;</p> | |

SUMMARY RECOMMENDATIONS ON INSTITUTIONAL DEVELOPMENT (2/3)

Table 12-01 (2/3)

| Classification | Short-run Period | Medium/Long-run Period |
|--|--|---|
| | <p>(8) Give priority in the training of permanent personnel over project contractual and other non-permanent personnel;</p> <p>(9) Provide equal opportunity to both field office and Central Office personnel in the allocation of training opportunities;</p> <p>(10) In general, avail more of short-term courses instead of long-term courses, whether local or foreign based, specially those under grant-in-aids;</p> <p>(11) In view of the limited number of permanent staff vis-a-vis projects to be implemented, provide more emphasis on supervisory management courses, specially for engineers;</p> <p>(12) Provide a more attractive compensation package to project contractual personnel and other temporary employees like project-in-charges and IDOs;</p> <p>(13) Conduct a periodical inventory of facilities, equipment and vehicles in order to keep abreast of their current status and priority needs for repair/replacement;</p> <p>(14) Give attention to proper O&M of facilities, equipment and vehicles.</p> <p>(15) Given limited fund allocation, adopt a workable phasing of construction activities but without sacrificing structural quality;</p> <p>(16) Seek temporary sources of financing for project construction activities (until DBM's fund allocation is actually released) like the NIA's Corporate Fund, government and private commercial banks and non-government organizations so as to commence construction works in the relatively rain-free months of January to April;</p> | <p>(10) Continue to provide regular funding for basic training courses like basic leadership development, financial management and system management but accommodate new relevant training courses with significant demand such as irrigated crop diversification scheme;</p> <p>(11) Let the existing training development unit at the Central Office provide the overall coordination in the planning, programming and implementation of all training courses, regardless of funding sources;</p> <p>(12) Strongly pursue the efforts to upgrade the salaries of PIEs equivalent to the level of other agencies' chief of offices with province-wide duties and responsibilities;</p> <p>(13) Standardize rules an VIG allocation system; consider the possibility of incorporating a "penalty system" alongside with the present incentive scheme in selecting RIOs/PIOs to qualify for VIG;</p> <p>(14) Provide adequate number of buildings and facilities, office equipment, construction equipment, survey and hydrology equipment and vehicles per PIO and RIO;</p> <p>(15) Seek other sources of temporary financing for project construction activities (until DBM's fund allocation is actually released) like the NIA's Corporate Fund, government and private commercial banks and non-government organizations so as to commence cons</p> <p>(16) Establish a regular seed fund for investigation and survey of proposed projects which would be replenished once project funds are available for continuity of such activities; and</p> <p>(17) Minimize the part of project funds (about 30%) that is regularly allocated for budgetary reserve fund, management fees and general overhead surcharges and instead, provide more allotment directly to project construction works.</p> |
| <p><u>Facilities and Logistics</u></p> | | |
| <p><u>Funding</u></p> | | |

SUMMARY RECOMMENDATIONS ON INSTITUTIONAL DEVELOPMENT (3/3)

| Classification | Short-run Period | Medium/Long-run Period |
|---|--|--|
| Irrigators Associations (IAs) Organizational/operational | <p>(17) Give continuous emphasis on the uniqueness of a CID project vis-a-vis other government projects; i.e., its participatory approach, self-liquidating or non-dole-out mechanism and timeliness in relation with the poverty alleviation and economy measures of the government;</p> <p>(18) Avoid over-dependency of IAs on the IDOs and/or prevent the tendency of IDOs to provide "baby-treatment" to the IAs; encourage the IAs to handle a bigger share of the task or responsibility of any given project activity;</p> <p>(19) When the amortization problem is attributed to natural calamities and the IA requests for loan readjustment, immediately provide a revised repayment scheme taking into consideration both the IA's financial capability and NIAs budgetary standing;</p> <p>(20) Conduct an intensive information campaign for O&M fee collection by means of reminders during regular IA meetings, individual notices to farmers and if possible, by radio broadcasts before and after the harvest seasons;</p> <p>(21) Require the collectors to prepare their respective quotas and provide appropriate incentives based on collection performance;</p> <p>(22) For a perennially delinquent IA member, let the irrigation superintendent and/or other higher IA officials do the collection;</p> <p>(23) Provide access to other government and private agencies/institutions that could provide technical, financial and other forms of assistance.</p> | <p>(18) Ensure that a great portion, if not all, of the equity contribution shall be in terms of labor input by the IAs and that at least the minimum wage is observed and that the amount to be deducted from the daily wage is not too large as to make the net daily income less attractive to farmers;</p> <p>(19) Regularly assess IA's weaknesses, strengths and potentials in so far as their management and operational capabilities are concerned and provide appropriate training correspondingly;</p> <p>(20) Consider the possibility of adopting a "combined incentive and penalty system" in the collection of amortization fee by providing discount on early or timely payment and penalty on late or non-payment;</p> <p>(21) Adopt an incentive scheme for advanced and timely payment of O&M due and apply the penalty system only after all the persuasive measures have failed;</p> |
| Facilities and Logistics/ Funding | | <p>(22) In line with the self-improvement policy, encourage IAs to procure, on a gradual and priority need basis, basic facilities and logistics for their operation, taking into consideration their own financial resources and available funding assistance; and</p> <p>(23) Whenever possible, participate in the public bidding of used government farm, construction and other equipment</p> |

LIST OF CIP AFFECTED BY ERUPTION OF MT. PINATUBO

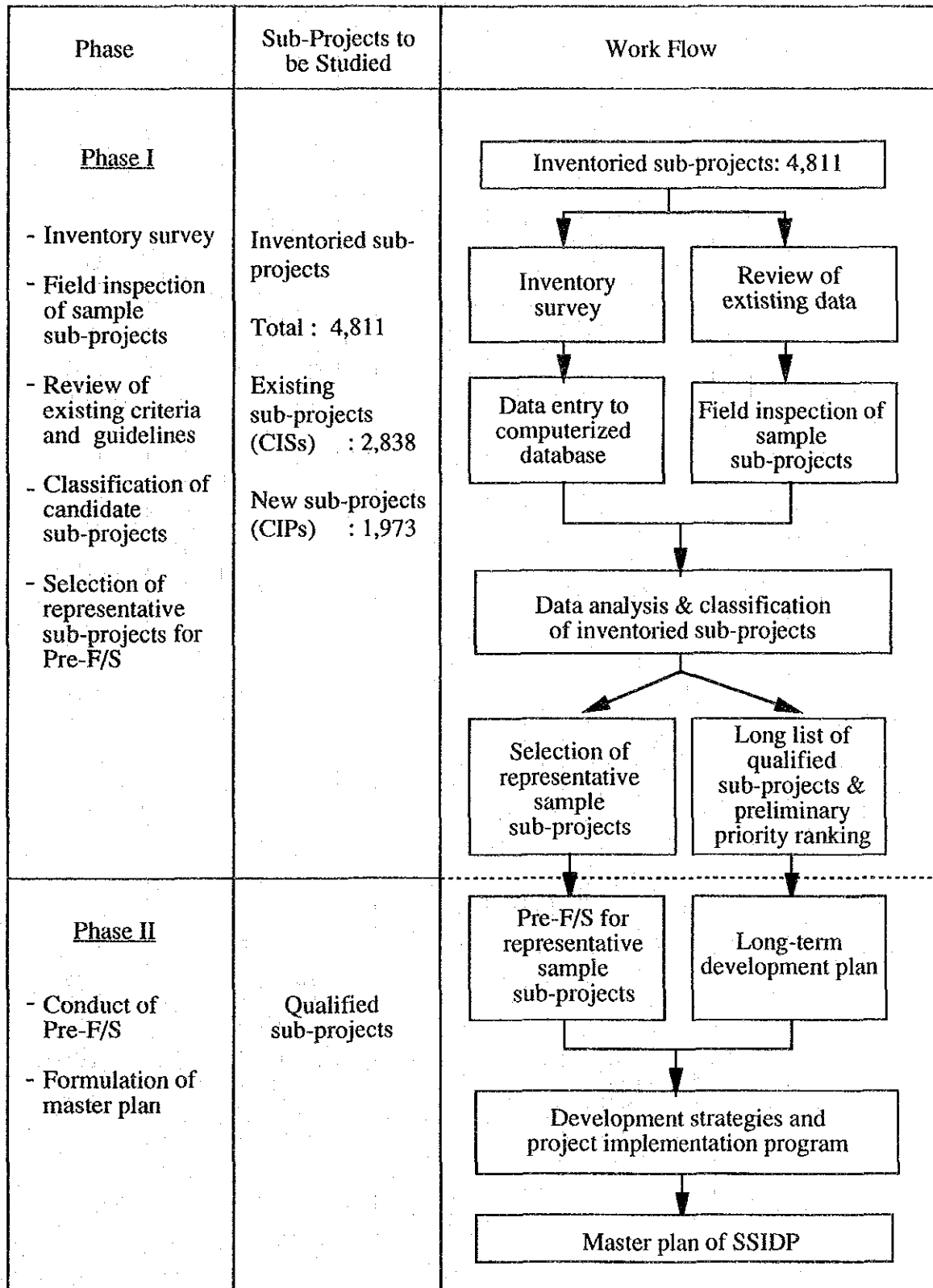
| Name of CIP | Area (ha) |
|--|-----------|
| 1. <u>Within 20 km Radius</u> | |
| 1.1 TARLAC | |
| 1. Marimla CIP | 130 |
| 1.2 PAMPANGA | |
| 1. Dolores CIP | 150 |
| 2. Tugtugan CIP | 211 |
| Sub-total | (361) |
| Total-1. | 491 |
| 2. <u>Within 20 to 30 km Radius</u> | |
| 2.1 PAMPANGA | |
| 1. Sapang Balen CIP | 90 |
| 2. Del Rosario CIP | 100 |
| 3. San Jose CIP | 220 |
| 4. Casaugan CIP | 125 |
| Sub-total | (535) |
| Total-2. | 535 |
| 3. <u>Within 30 to 40 km Radius</u> | |
| 3.1 PAMPANGA | |
| 1. Sapa Libutad CIP | 100 |
| 2. San Antonio CIP | 100 |
| 3. San Pablo Central CIP | 215 |
| 4. Laput CIP | 70 |
| 5. Calulut II CIP | 64 |
| 6. San Jose Panlumacan CIP | 100 |
| 7. San Jose CIP | 90 |
| 8. Concepcion CIP | 150 |
| 9. San Miguel CIP | 100 |
| Sub-total | (989) |
| Total-3. | 989 |
| Grand Total | 2,015 |

LIST OF CIS AFFECTED BY ERUPTION OF MT. PINATUBO

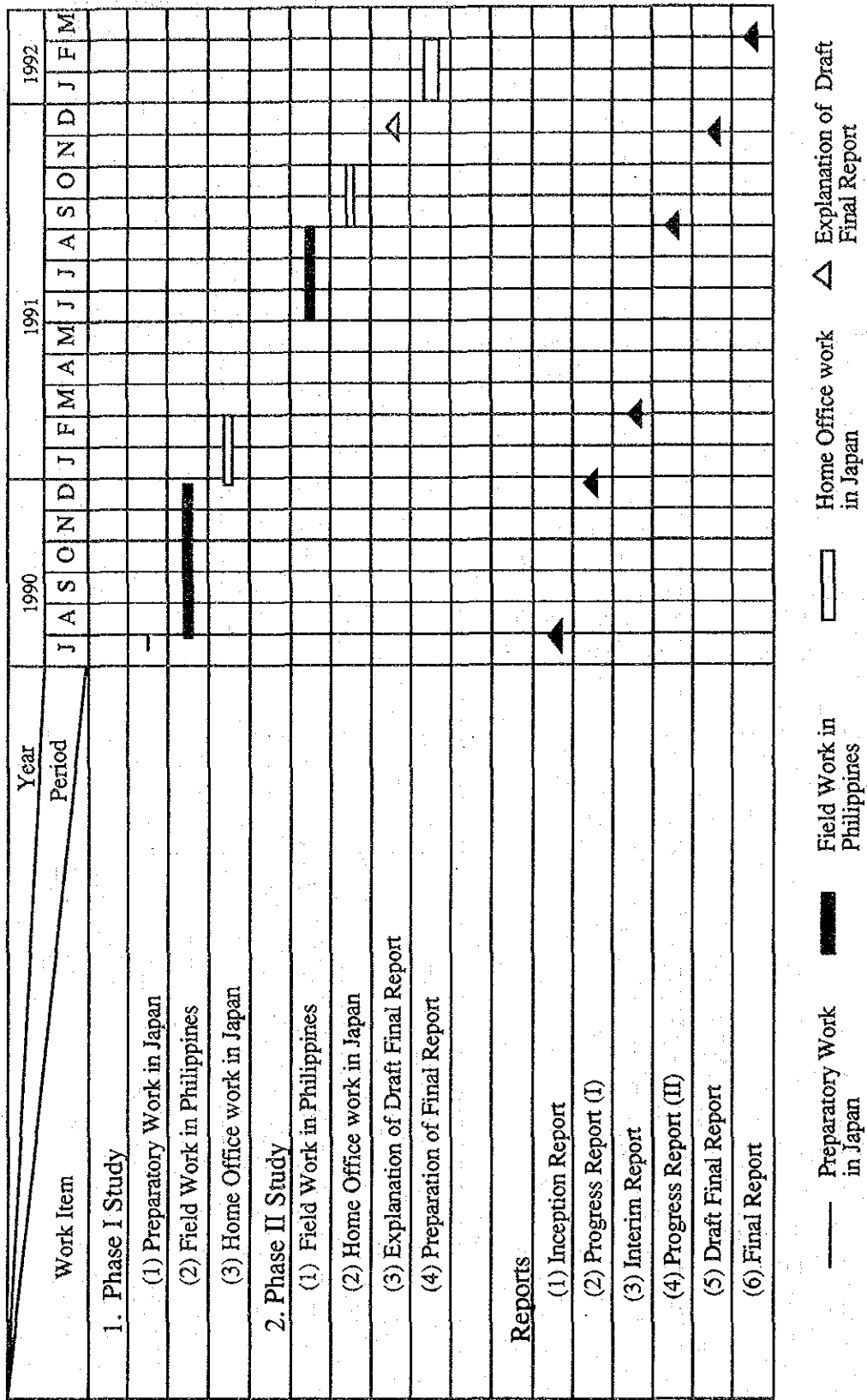
| Name of CIS | Area (ha) | Name of CIS | Area (ha) |
|-------------------------------------|-----------|----------------------------|--------------|
| 1. Within 20 km Radius | | | |
| 1.1 TARLAC | | 3. San Martin CIS | 240 |
| 1. Ambalingit CIS | 290 | 4. Marita CIS | 100 |
| 1.2 PAMPANGA | | 5. Lilibangan CIS | 240 |
| 1. Porac CIS | 165 | 6. San Bartolome CIS | 362 |
| 2. Villa Maria CIS | 54 | 7. Telabanca CIS | 386 |
| Sub-total | (219) | Sub-total | (1,933) |
| Total-1. | 509 | | |
| 2. Within 20 to 30 km Radius | | 3.2 ZAMBALES | |
| 2.1 TARLAC | | 1. Lawis CIS | 500 |
| 1. Malonzo CIS | 173 | 2. Jolong-Matain CIS | 156 |
| 2.2 ZAMBALES | | 3. Cawag CIS | 200 |
| 1. Sacatihan CIS | 57 | Sub-total | (856) |
| 2. Mangan-Vaca CIS | 69 | | |
| Sub-total | (126) | 3.3 PAMPANGA | |
| 2.3 PAMPANGA | | 1. San Roque Balen CIS | 200 |
| 1. Quitangil CIS | 114 | 2. San Agustin CIS | 65 |
| 2. Sta. Maria CIS | 187 | 3. San Pedro CIS | 229 |
| 3. Upper Camachili CIS | 70 | 4. Sta. Cruz CIS | 92 |
| 4. Mawaque CIS | 131 | 5. Camias CIS | 58 |
| 5. Mabiga CIS | 70 | 6. San Vicente CIS | 350 |
| 6. Camachile CIS | 279 | 7. Lower Sapang Biabas CIS | 150 |
| 7. Tabun CIS | 70 | 8. Banquili CIS | 105 |
| 8. Paligui Libutad CIS | 93 | 9. Pandacaqui CIS | 280 |
| 9. Manibaug CIS | 175 | 10. Pulong Cacutud CIS | 50 |
| 10. Senora CIS | 110 | 11. Panlinlang CIS | 125 |
| 11. Macapagal CIS | 120 | 12. Arnao CIS | 120 |
| 12. Dali CIS | 206 | 13. Lico CIS | 90 |
| 13. Lusung CIS | 105 | 14. San Jose Malino CIS | 132 |
| 14. Natividad CIS | 205 | 15. Calulut CIS | 115 |
| 15. Sapang Godio CIS | 180 | 16. Divisoria CIS | 304 |
| Sub-total | (2,115) | 17. San Pabro CIS | 54 |
| 2.4 BATAAN | | 18. Cabetican CIS | 55 |
| 1. Bukaran CIS | 50 | 19. Danganan CIS | 52 |
| 2. Kairing CIS | 67 | 20. Dampol CIS | 110 |
| 3. Dalao CIS | 152 | 21. Lower Sta. Barbara CIS | 162 |
| 4. Pita CIS | 92 | 22. Cabalantian CIS | 150 |
| Sub-total | (361) | 23. San Juan Nepo CIS | 66 |
| Total-2. | 2,775 | Sub-total | (3,114) |
| 3. Within 30 to 40 km Radius | | 3.4 BATAAN | |
| 3.1 TARLAC | | 1. Pentor CIS | 154 |
| 1. Lubigan CIS | 155 | 2. Layac CIS | 150 |
| 2. Lab CIS | 450 | 3. Turbo-Turbo CIS | 56 |
| | | 4. Tama CIS | 89 |
| | | 5. Lower Maite CIS | 60 |
| | | Sub-total | (509) |
| | | Total-3. | 6,412 |
| | | Grand Total | 9,696 |

FIGURES

GENERAL WORK FLOW OF MASTER PLAN STUDY



GENERAL WORK SCHEDULE OF MASTER PLAN STUDY

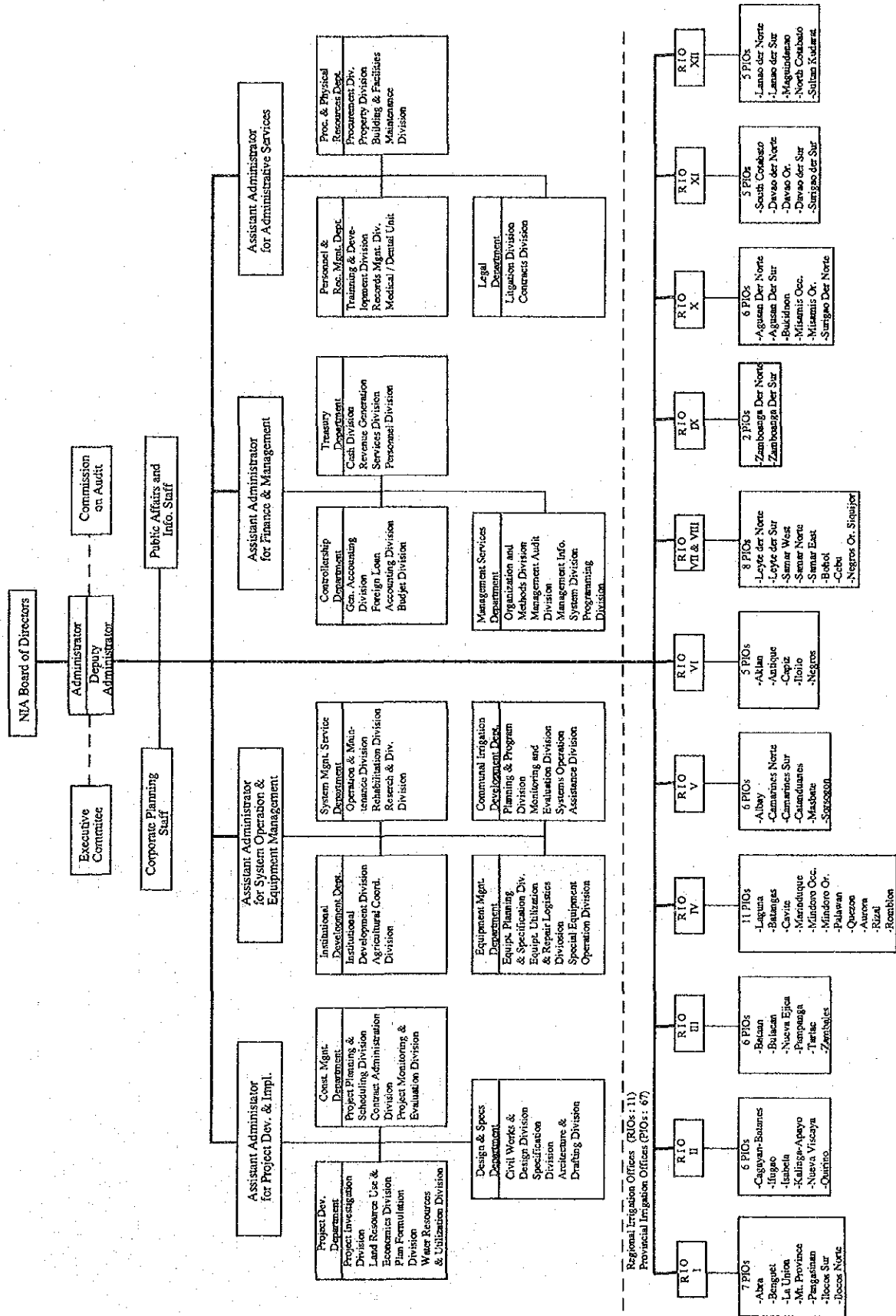


— Preparatory Work in Japan
 ■ Field Work in Philippines
 □ Home Office work in Japan
 △ Explanation of Draft Final Report

Fig. 1-02

Fig. 2-01

NIA ORGANIZATION STRUCTURE



PRESENT STATUS OF IRRIGATION DEVELOPMENT

Fig. 2-02 (1/2)

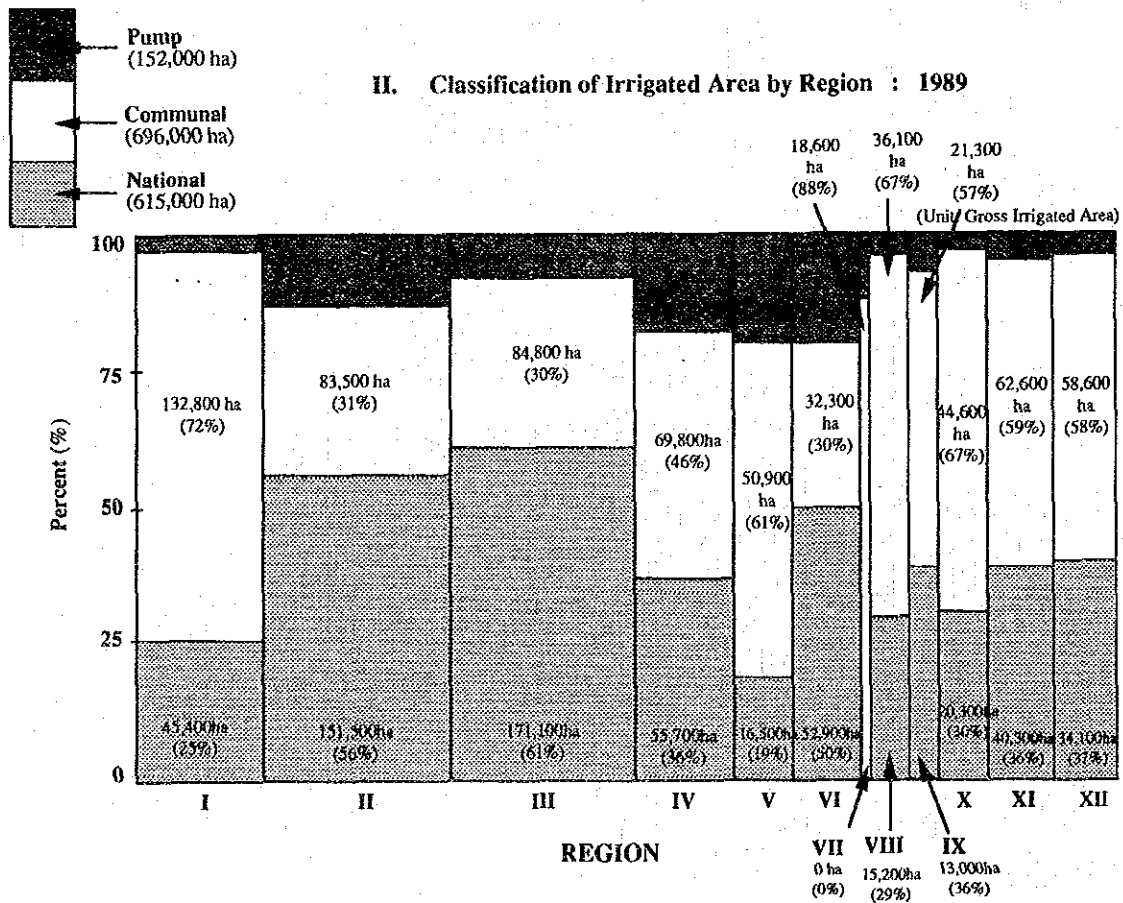
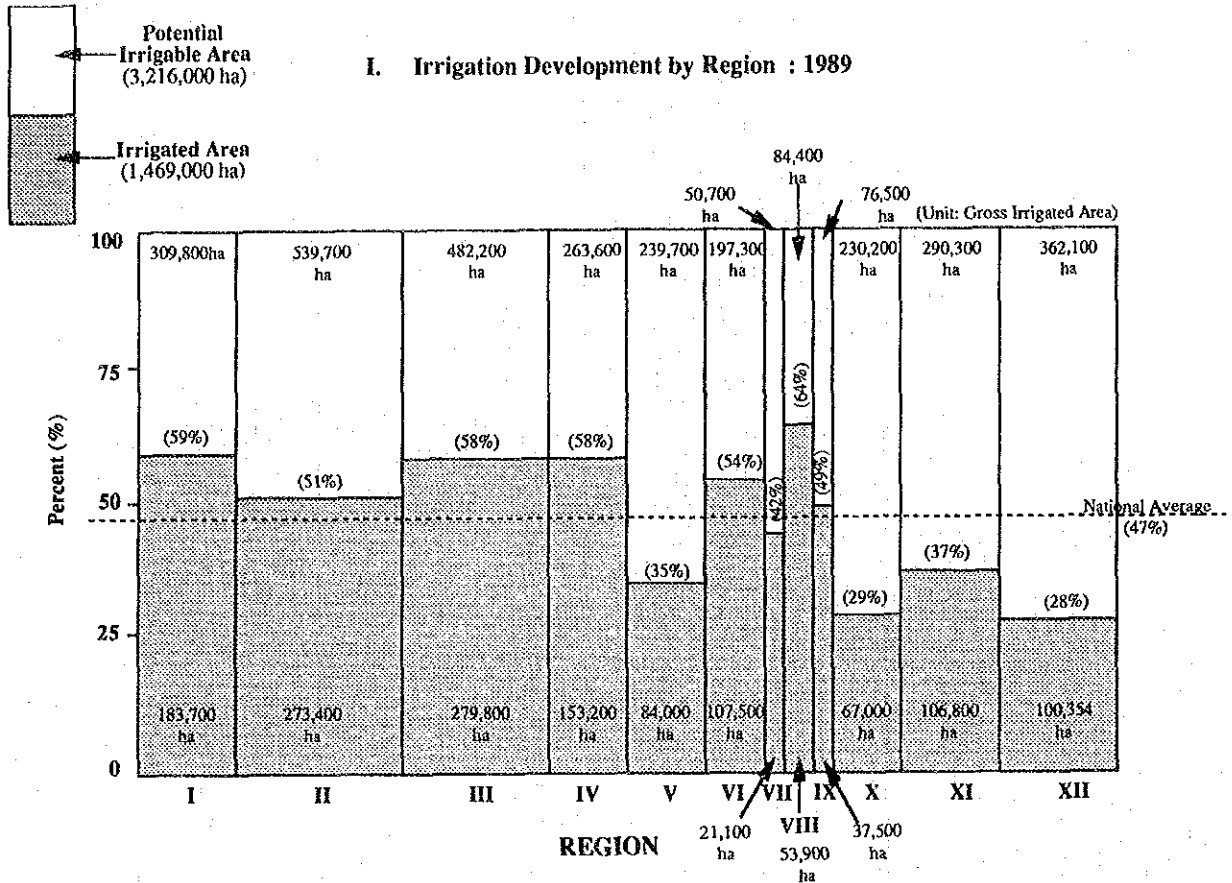


Fig. 2-02 (2/2)

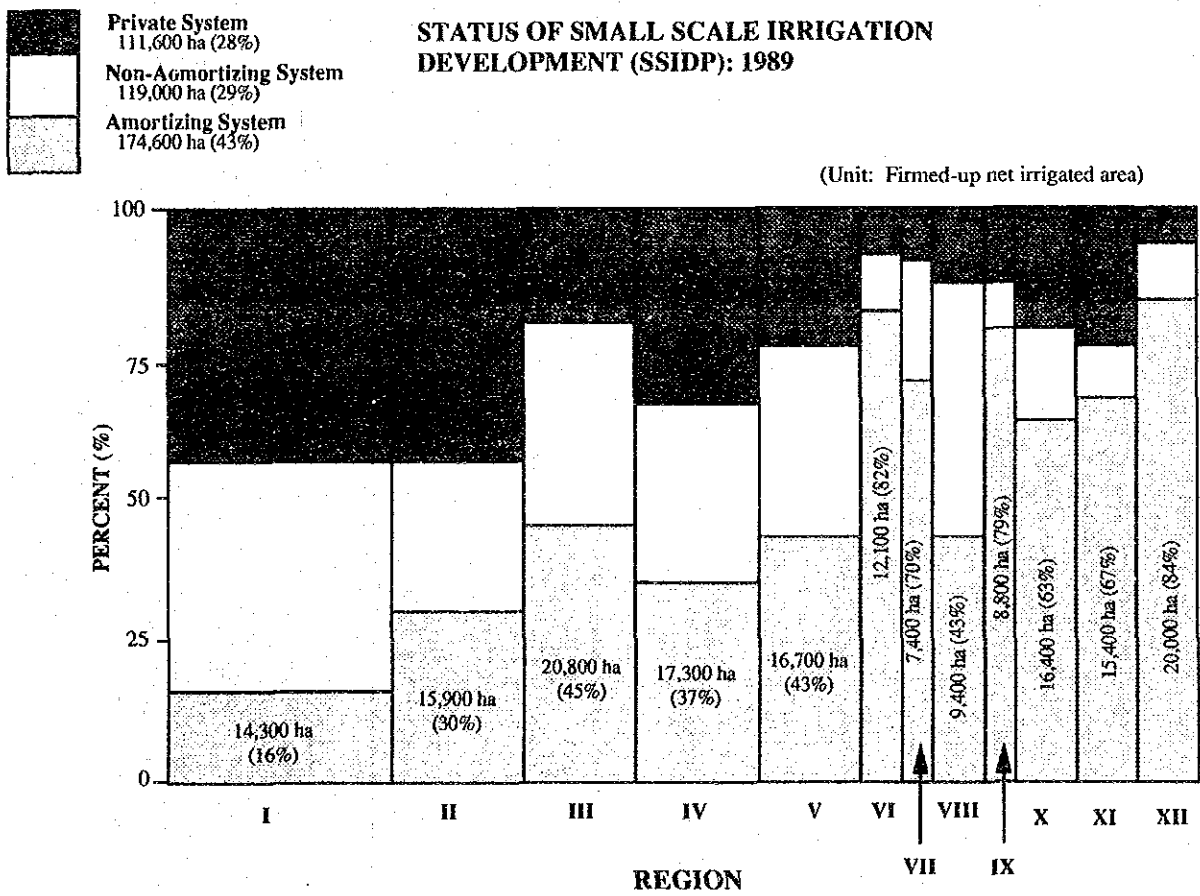
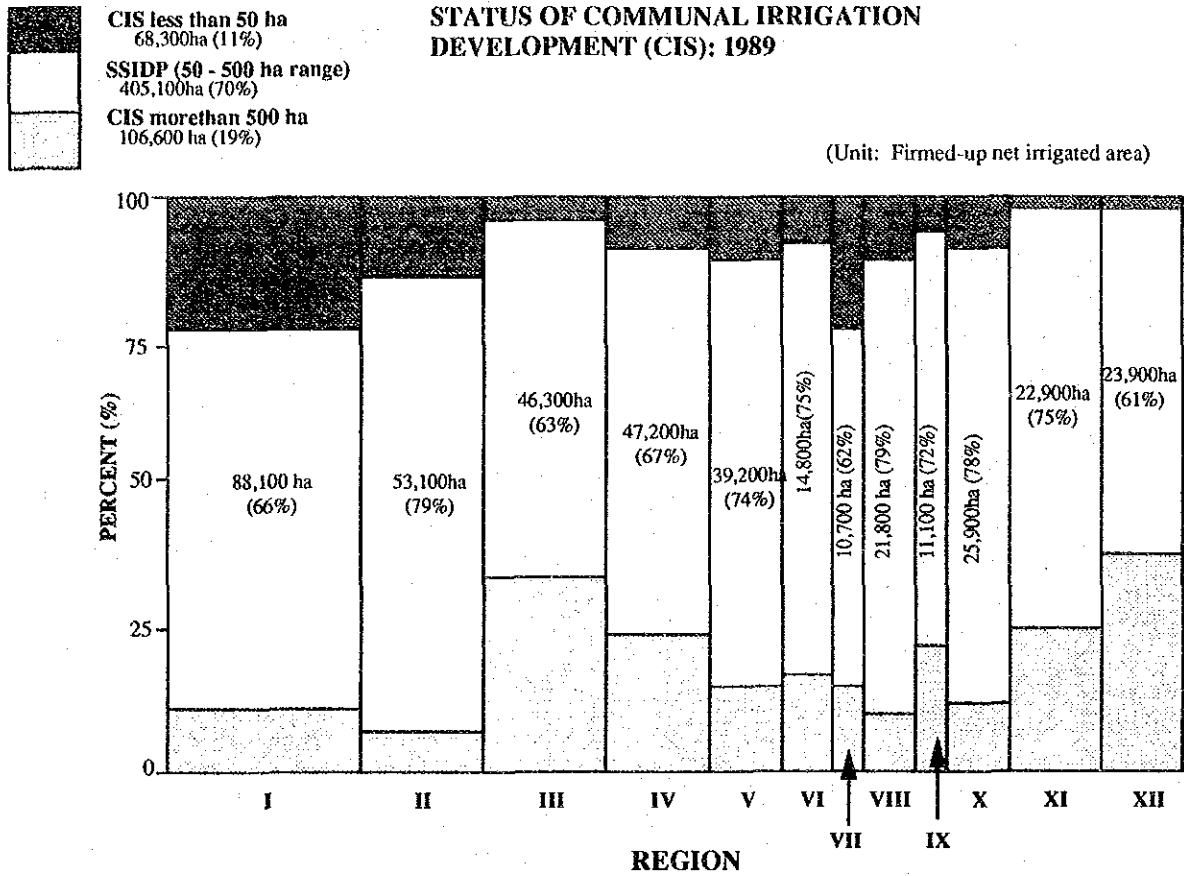
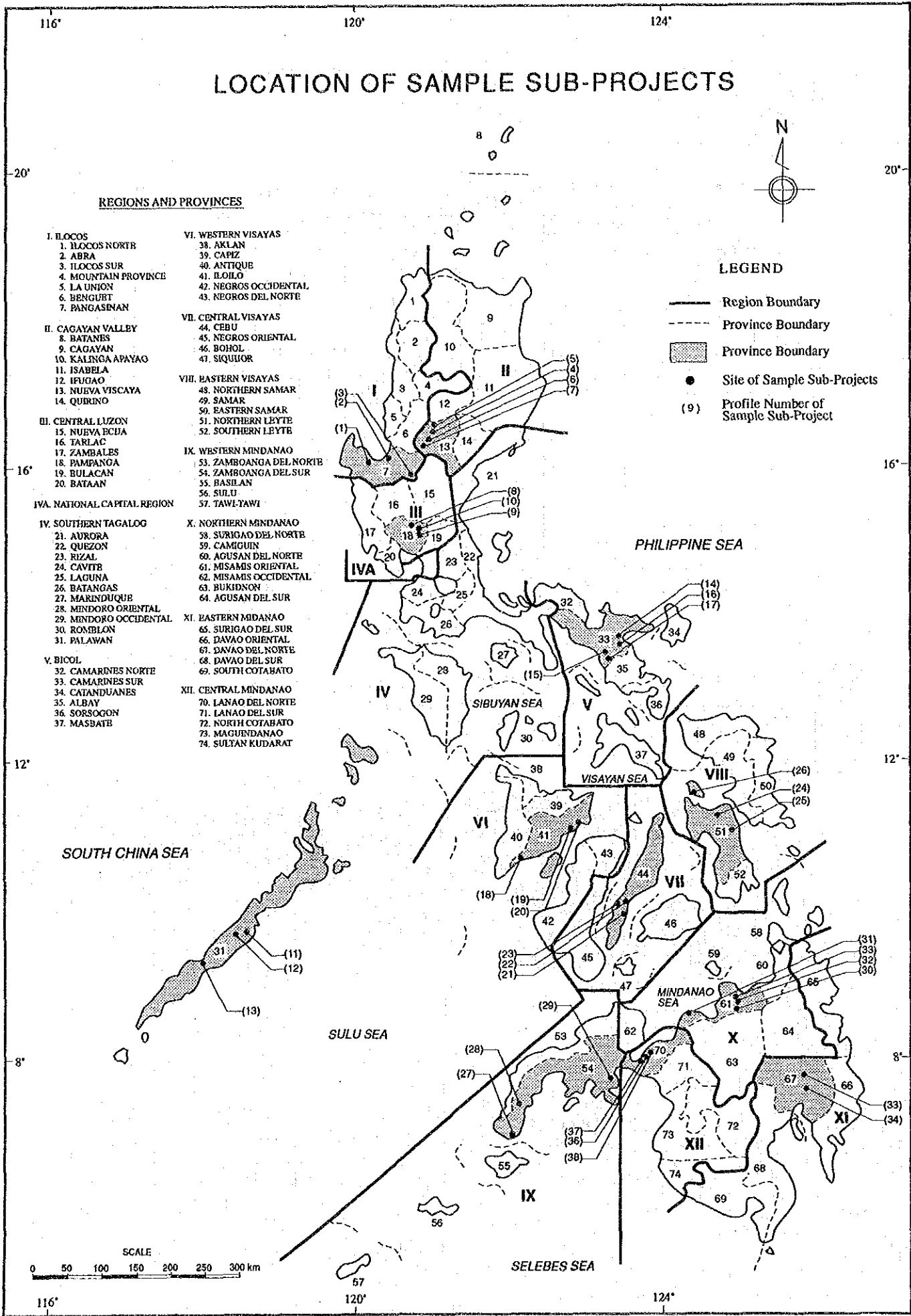
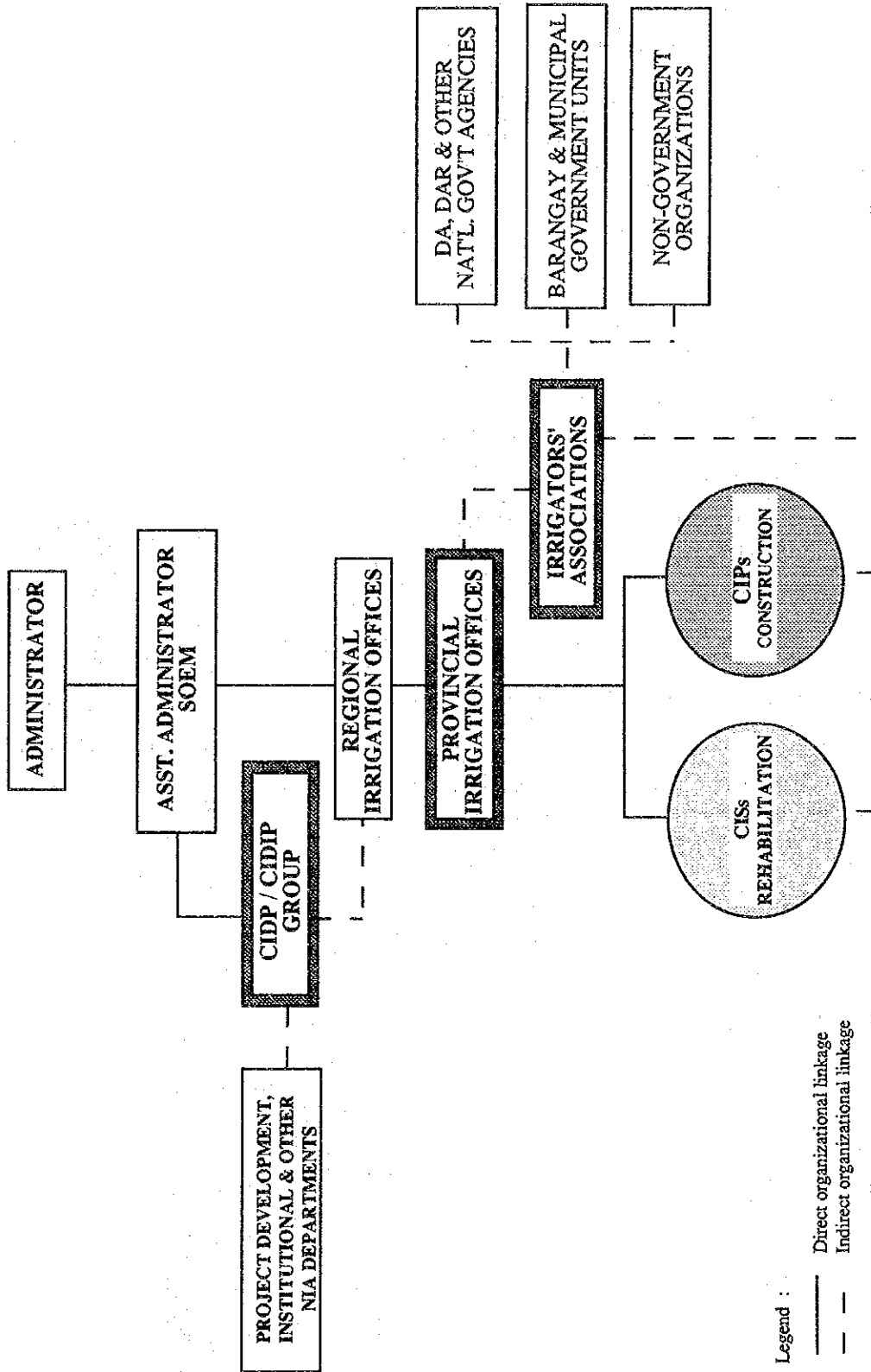


Fig. 3-01

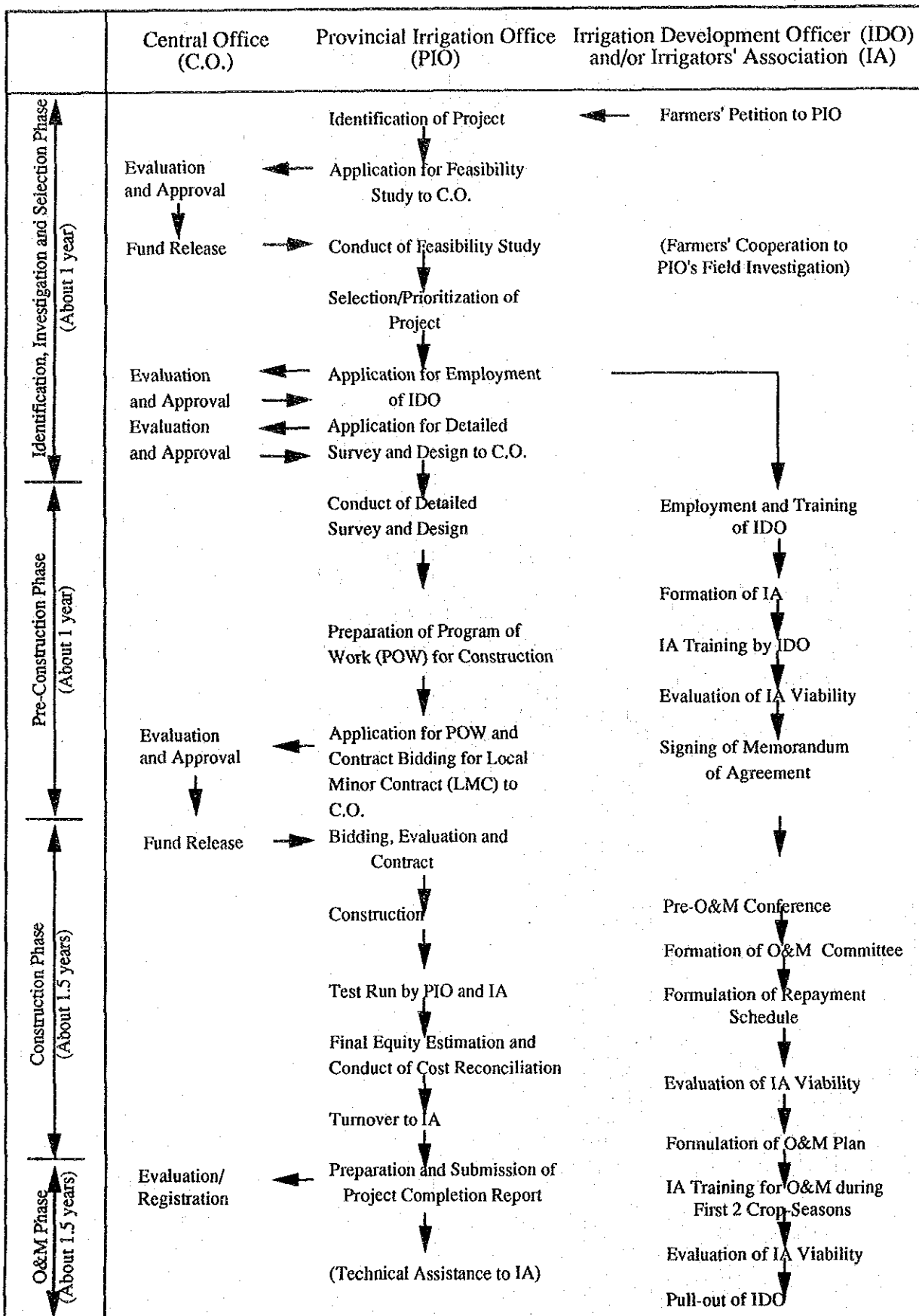


PRESENT ORGANIZATIONAL STRUCTURE FOR CIP / CIS IMPLEMENTATION



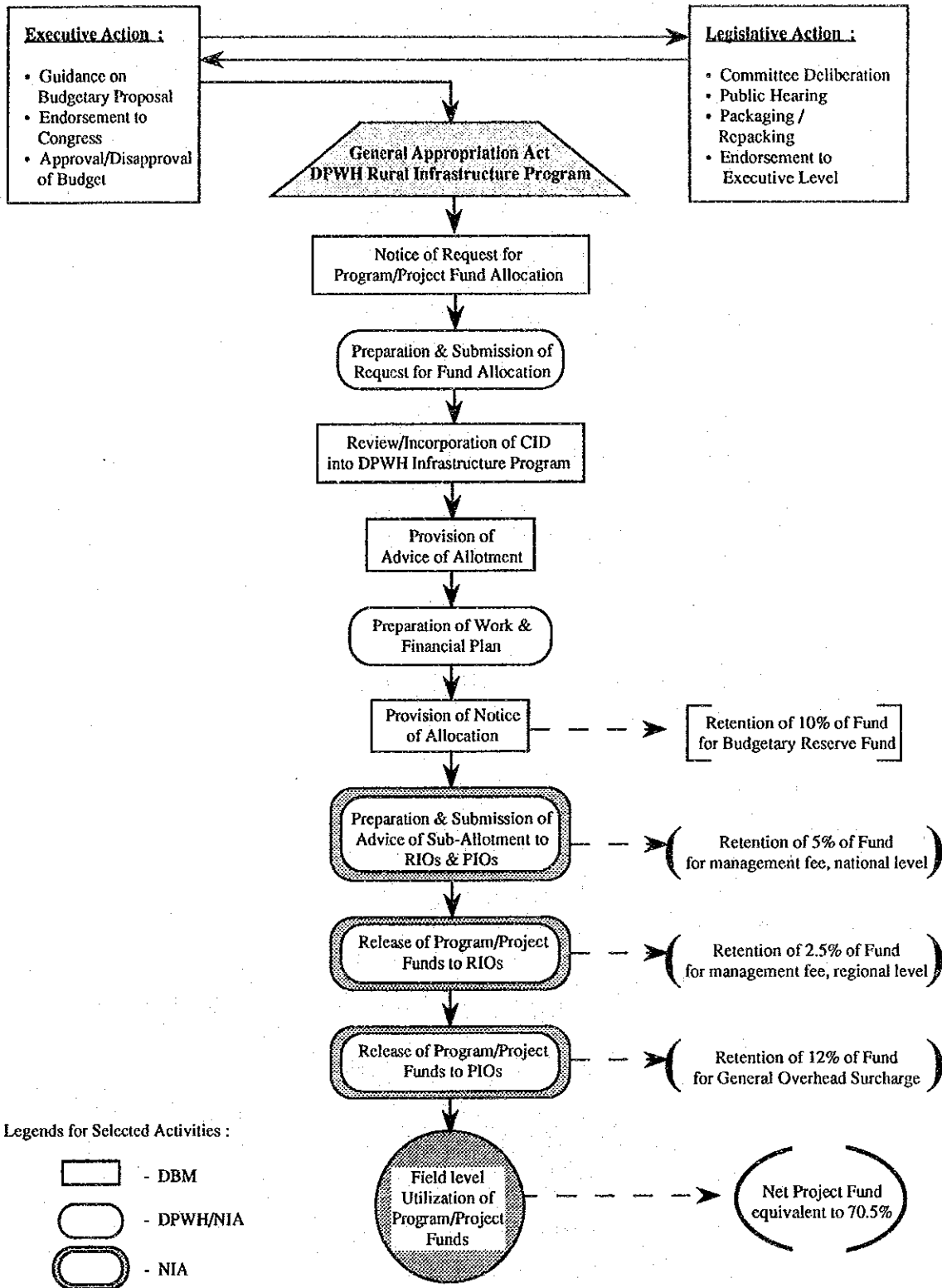
Legend :
 — Direct organizational linkage
 - - Indirect organizational linkage

MAIN WORK FLOW OF COMMUNAL IRRIGATION PROJECT IMPLEMENTATION

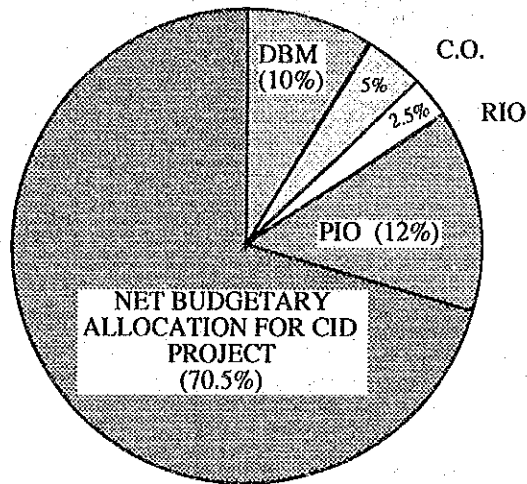


Note : Application and Submission from PIO to C.O. are made through the Regional Irrigation Office.

FLOWCHART OF CID BUDGETARY PREPARATION AND ALLOCATION PROCESS



TYPICAL BREAKDOWN OF BUDGETARY RETENTION FOR CID PROJECT



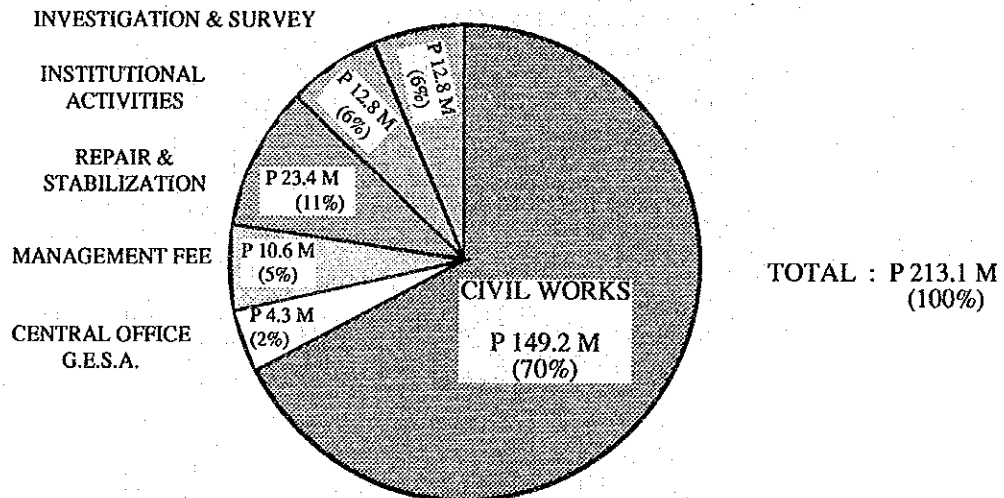
TOTAL : 100%

Notes :

- DBM - 10% for government contingency plan
- NIA/CO - 5% for management fee at national level
- RIO - 2.5% for management fee at regional level
- PIO - 12% for General Overhead Surcharge (GOS)

Total 29.5%

DISTRIBUTION OF THE CIDIP BUDGET FOR 1991, BY TYPE OF EXPENDITURE

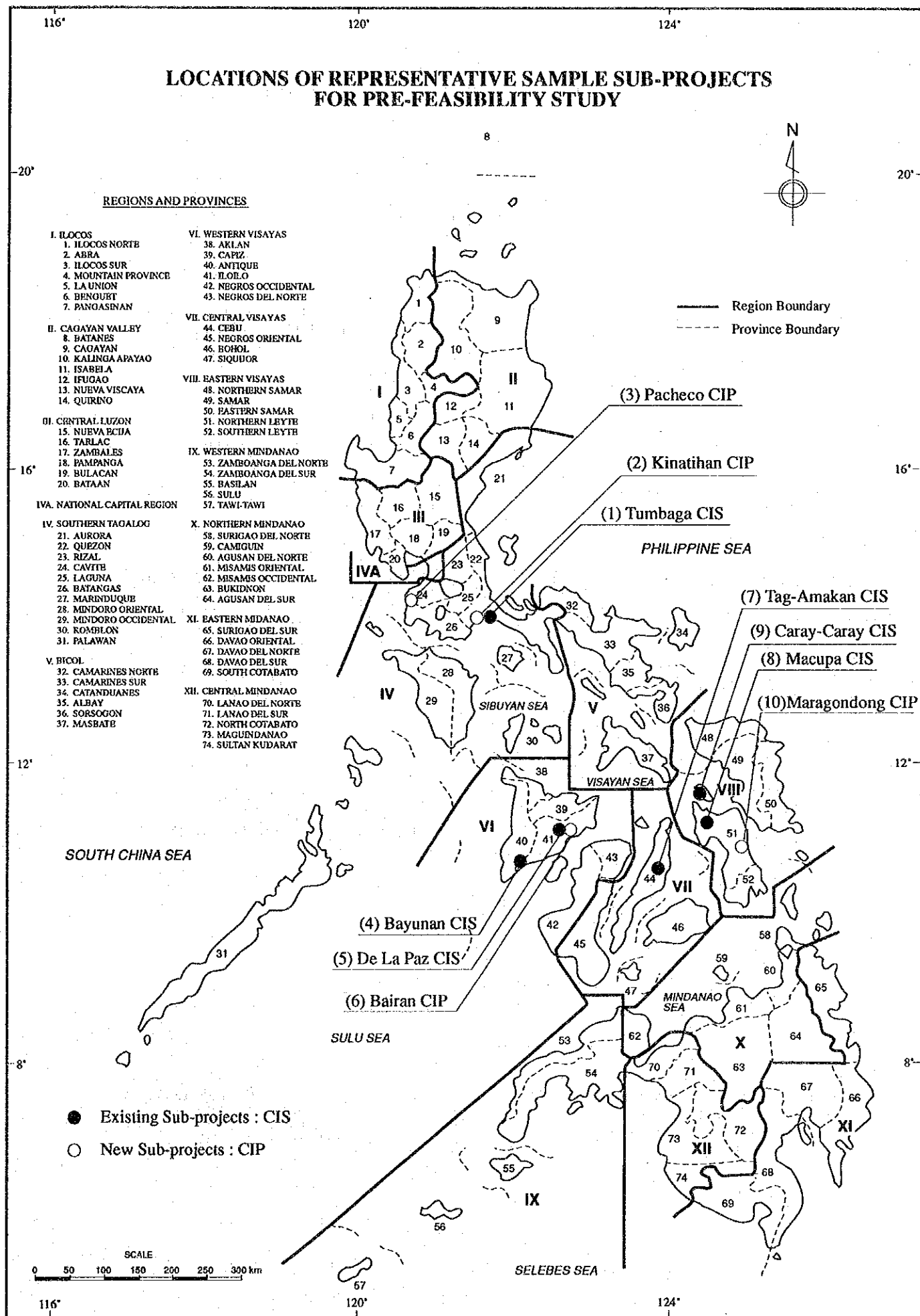


Notes :

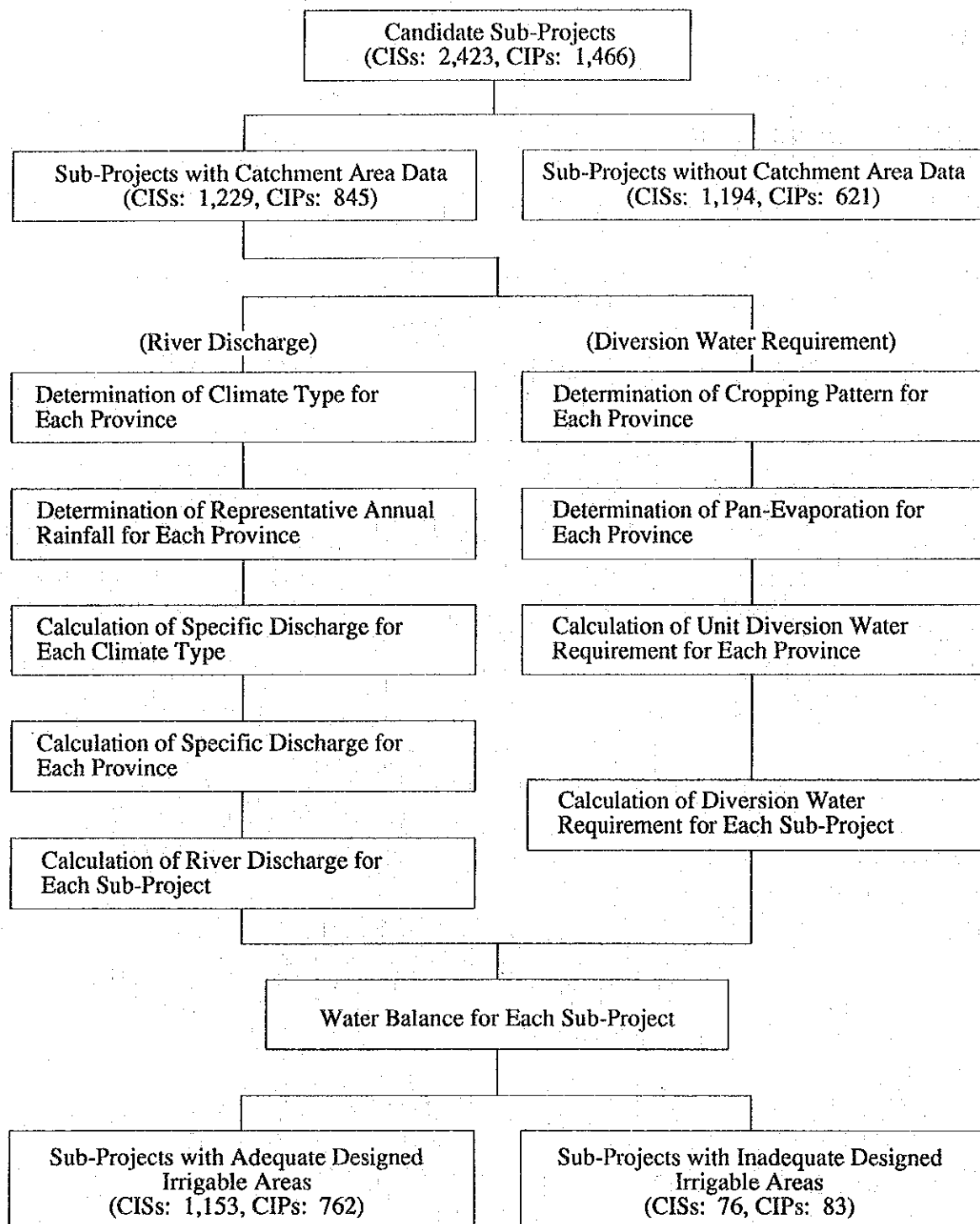
- G.E.S.A. - General Engineering, Supervision and Administration
- Civil Works - Direct cost for implementation
- RIO/PIO G.E.S.A. (maximum of 12% of direct cost)
- Contingency (maximum of 12% of direct cost)

Source : NIA CIDP/CIDIP GROUP

Fig. 4-01



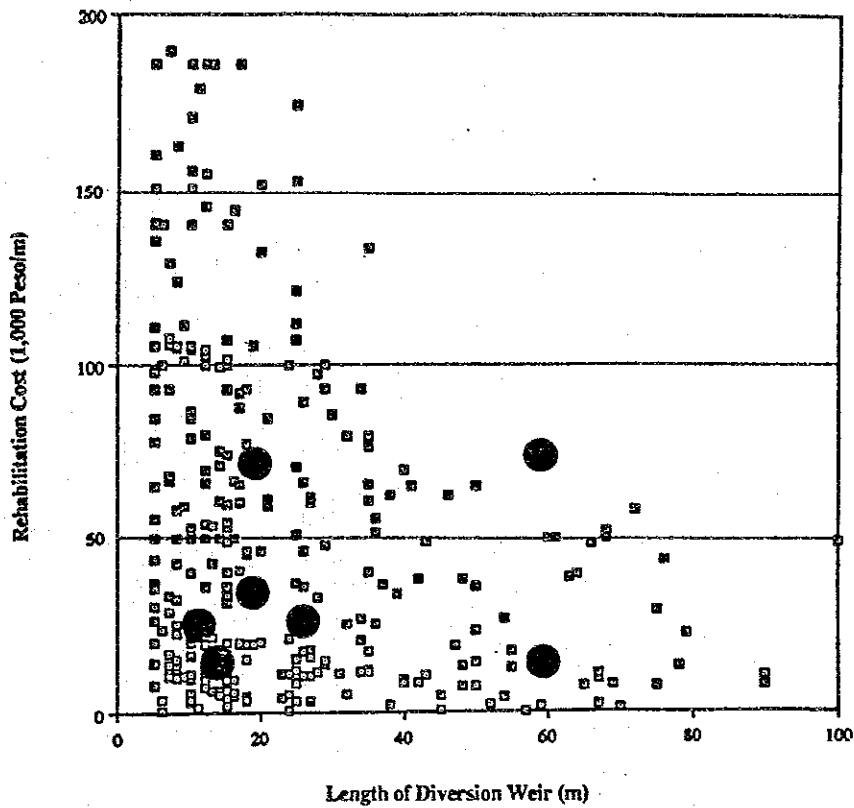
WORK FLOW FOR CROSS-CHECKING OF DESIGNED IRRIGABLE AREAS



DIVERSION WEIR (COST PER METER) : CIS/CIP

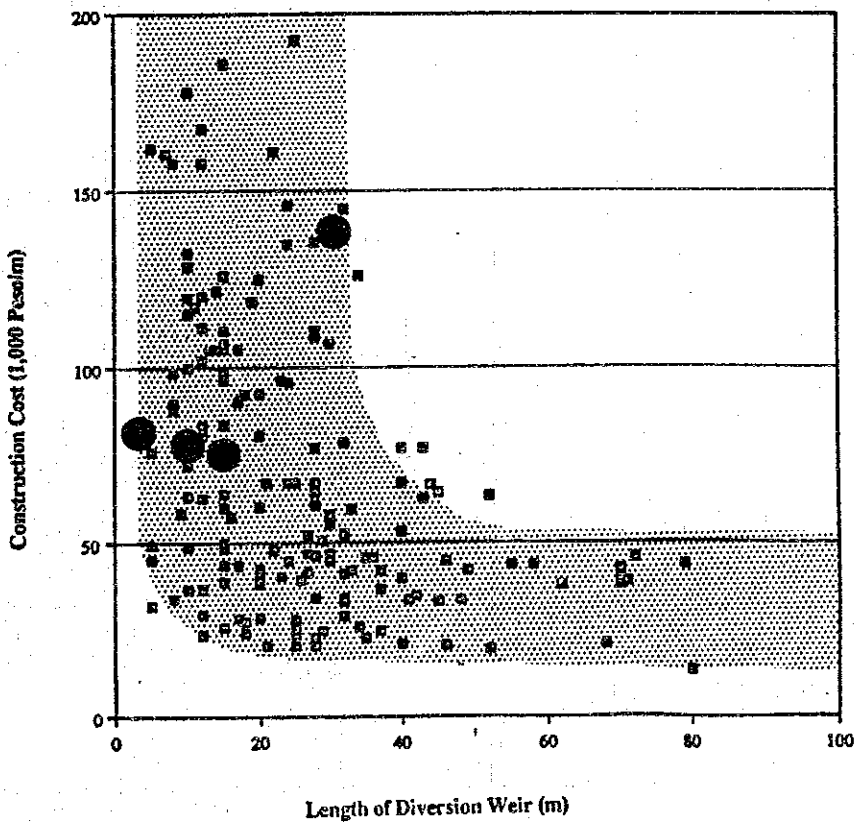
Fig. 5-02

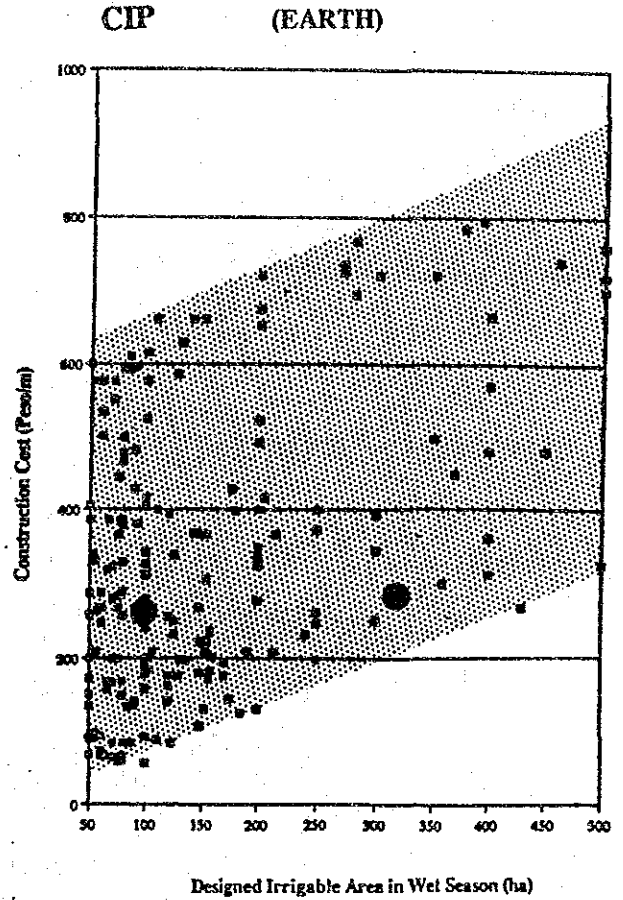
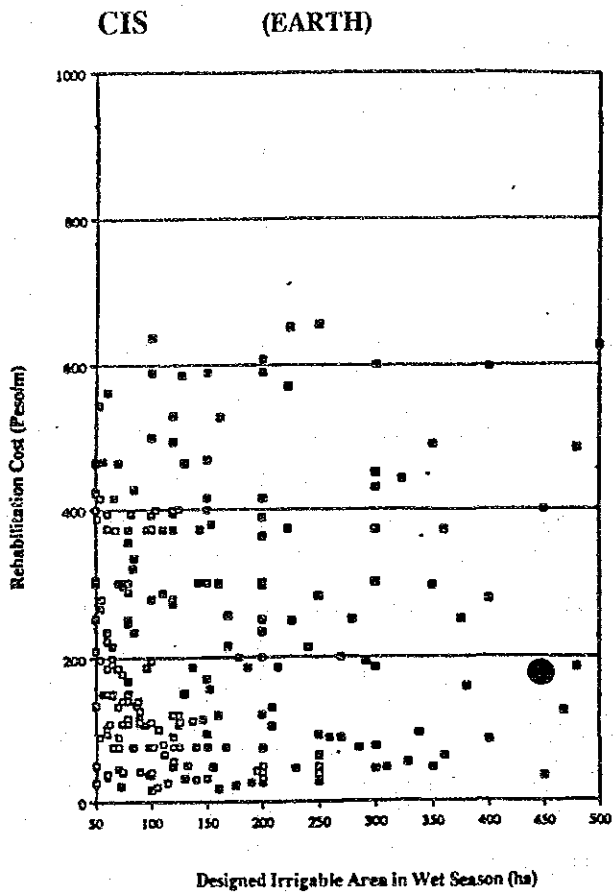
CIS



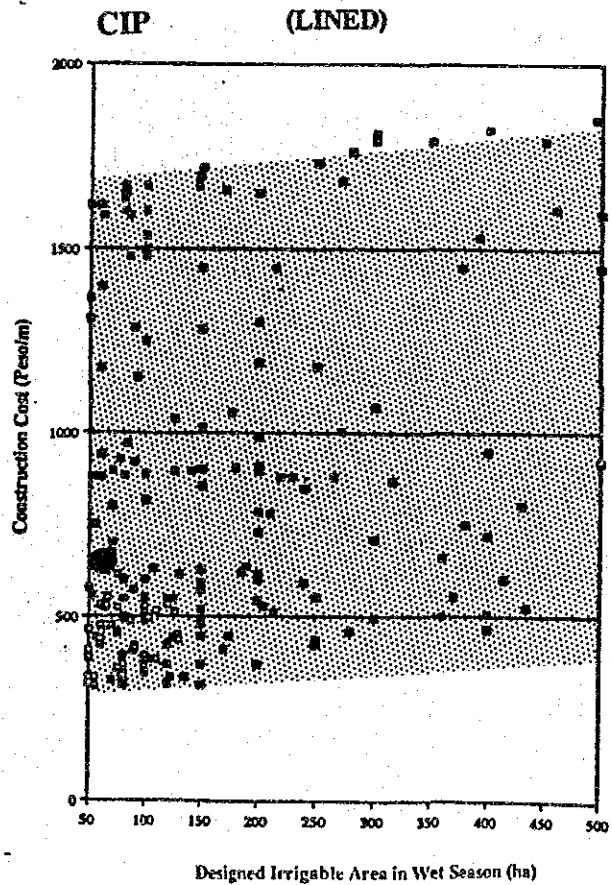
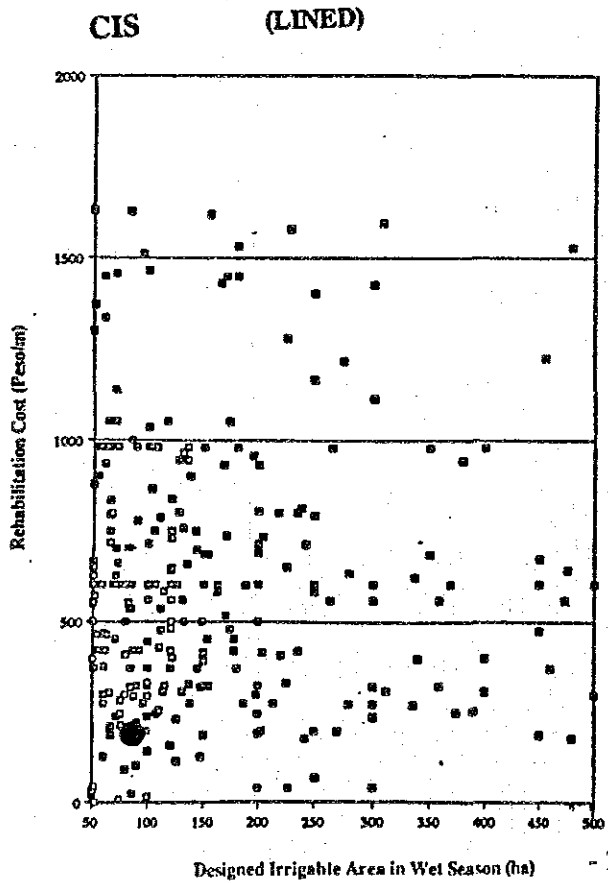
● : Representative Sample
Sub-Project for Pre-F/S

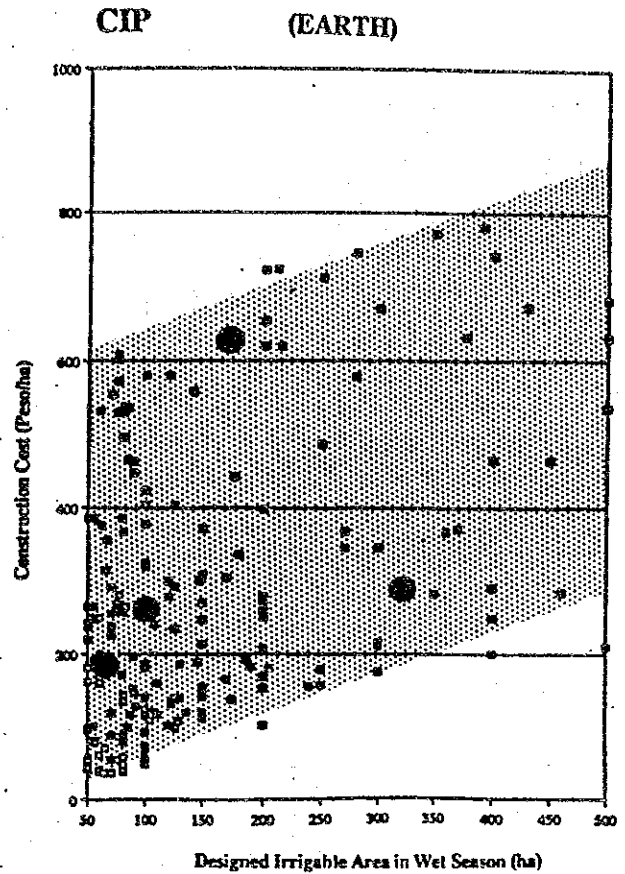
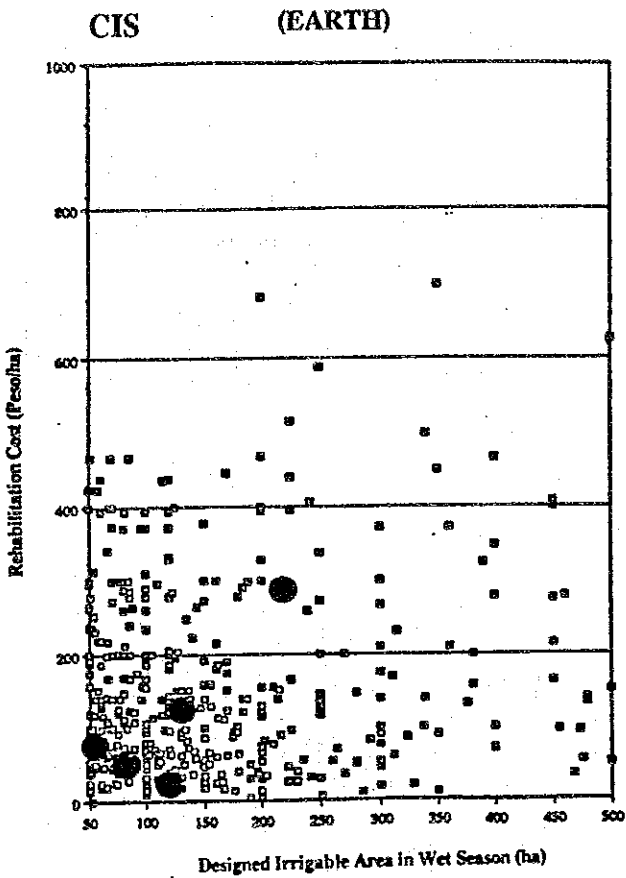
CIP



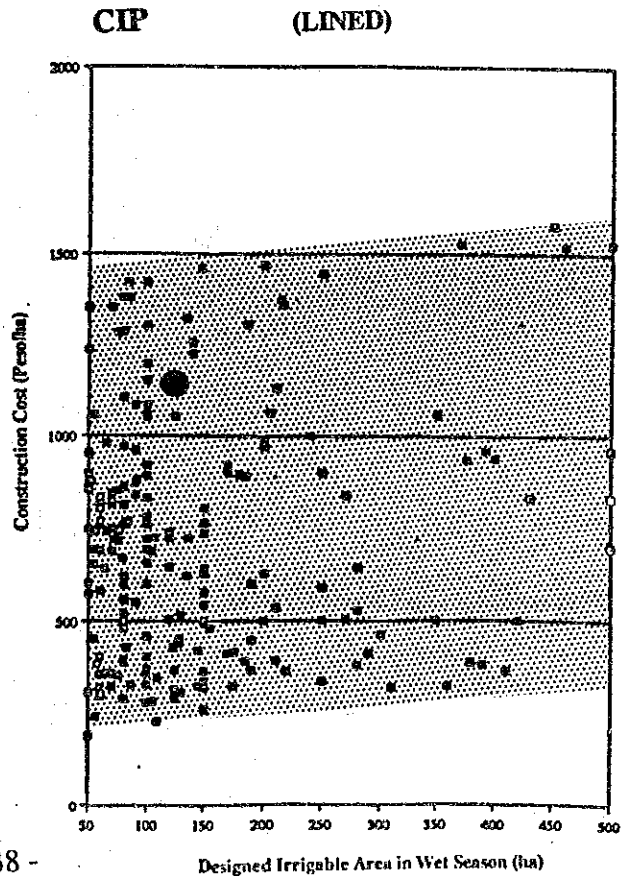
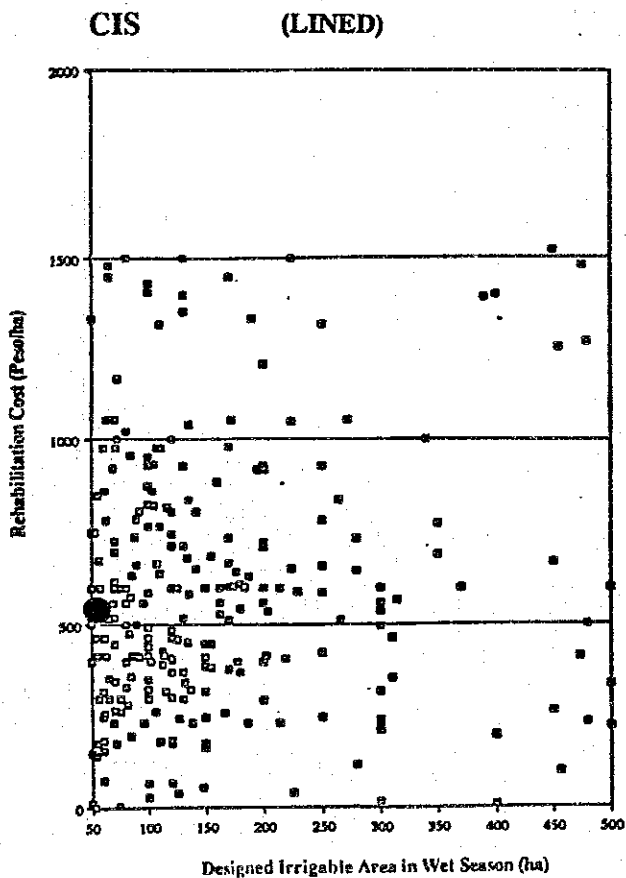


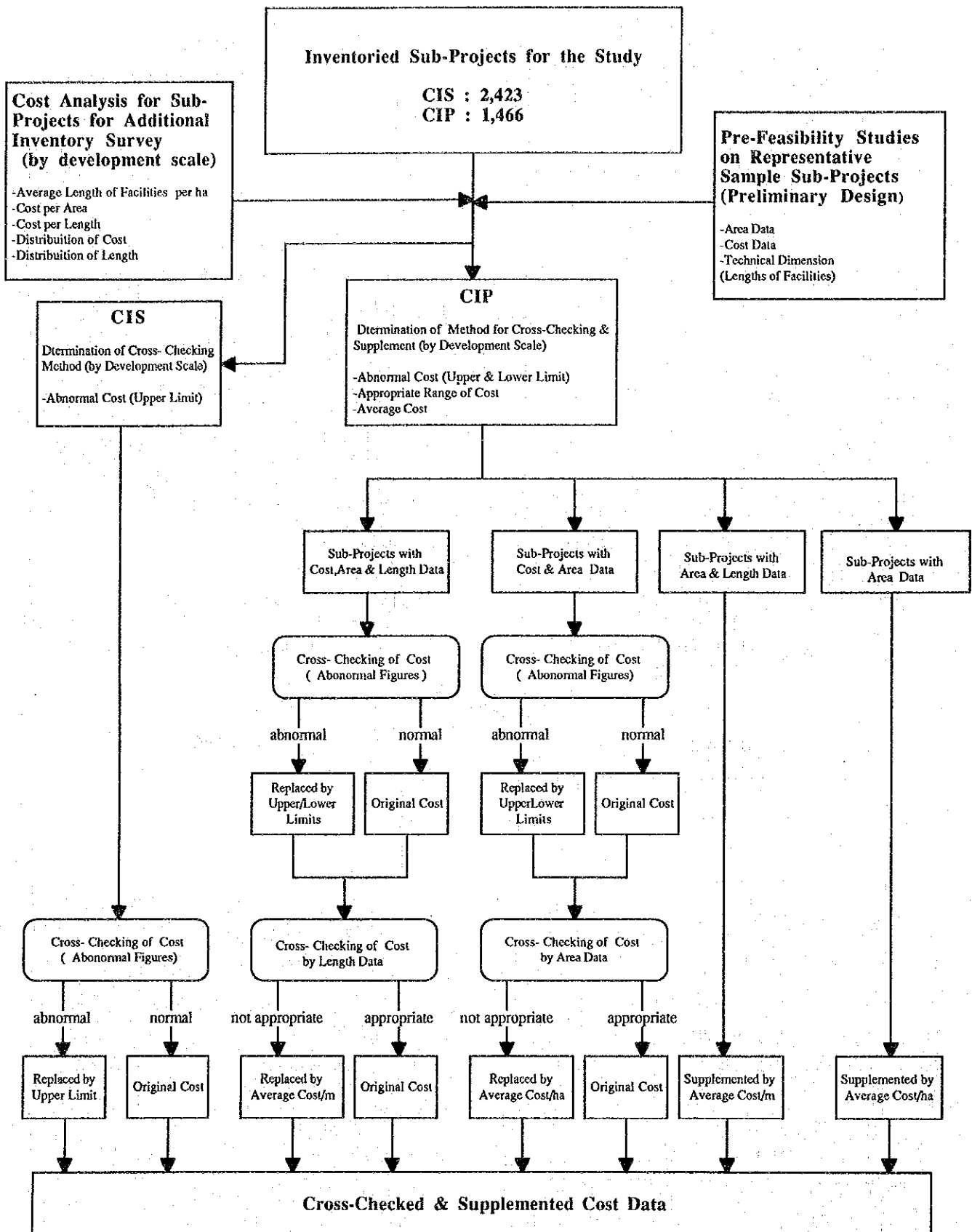
● : Representative Sample
Sub-Project for Pre-FIS

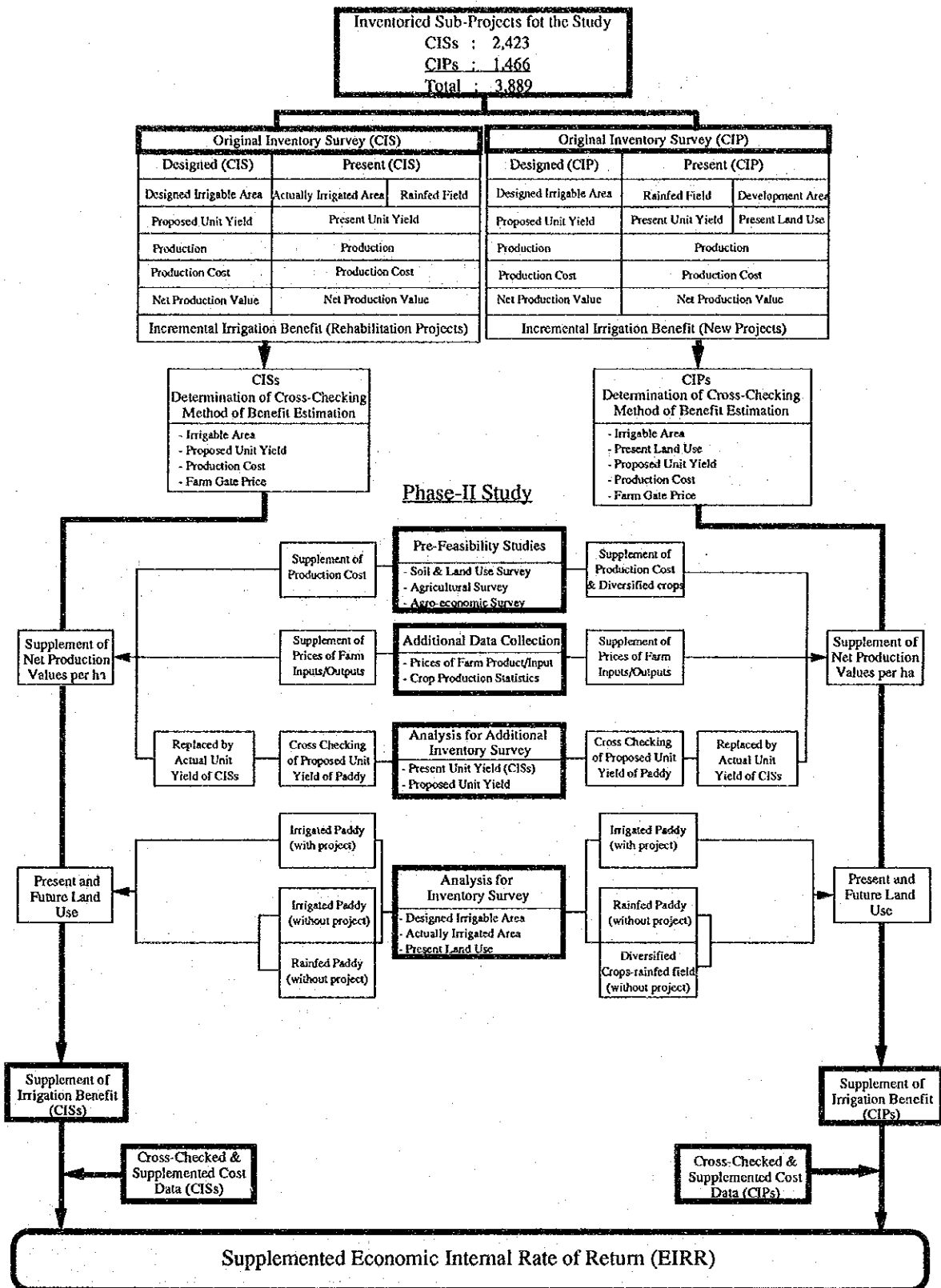




● : Representative Sample Sub-Project for Pre-FIS

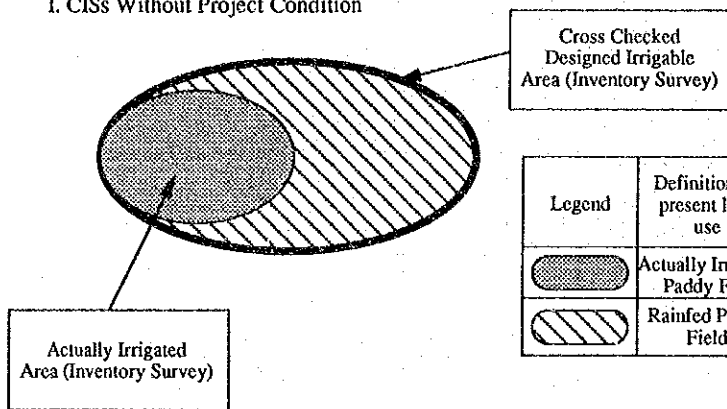






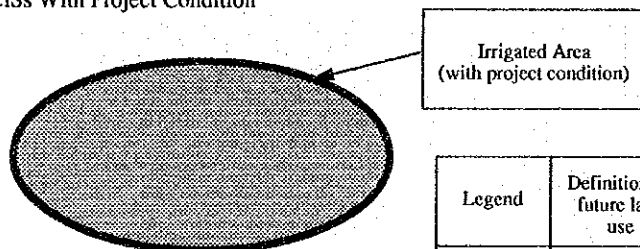
CISs

I. CISs Without Project Condition



| Legend | Definition of present land use | Definition of the unit yield | Unit Yield of Paddy ton/ha (average) | |
|--------|--------------------------------|------------------------------|--------------------------------------|------------|
| | | | Wet Season | Dry Season |
| | Actually Irrigated Paddy Field | Present Paddy Yield of CISs | 3.6 | 3.6 |
| | Rainfed Paddy Field | Present Paddy Yield of CIPs | 2.7 | 2.9 |

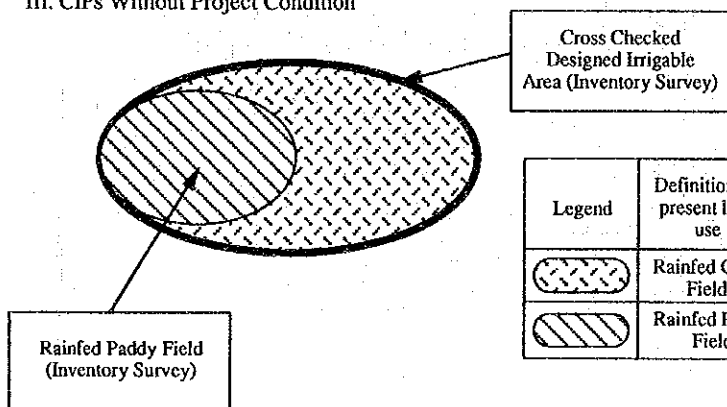
II. CISs With Project Condition



| Legend | Definition of future land use | Definition of the unit yield | Unit Yield of Paddy ton/ha (average) | |
|--------|-------------------------------|------------------------------|--------------------------------------|------------|
| | | | Wet Season | Dry Season |
| | Irrigated Paddy Field | Present Paddy Yield of CISs | 3.6 | 3.6 |

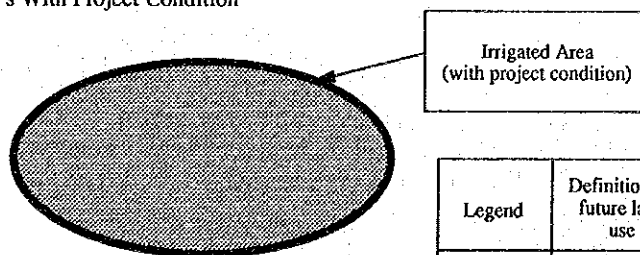
CIPs

III. CIPs Without Project Condition



| Legend | Definition of present land use | Definition of the unit yield | Unit Yield of Paddy ton/ha (average) | |
|--------|--------------------------------|------------------------------|--------------------------------------|------------|
| | | | Wet Season | Dry Season |
| | Rainfed Corn Field | Average Corn Yield | 1.0 | 1.0 |
| | Rainfed Paddy Field | Present Paddy Yield of CIPs | 2.7 | 2.9 |

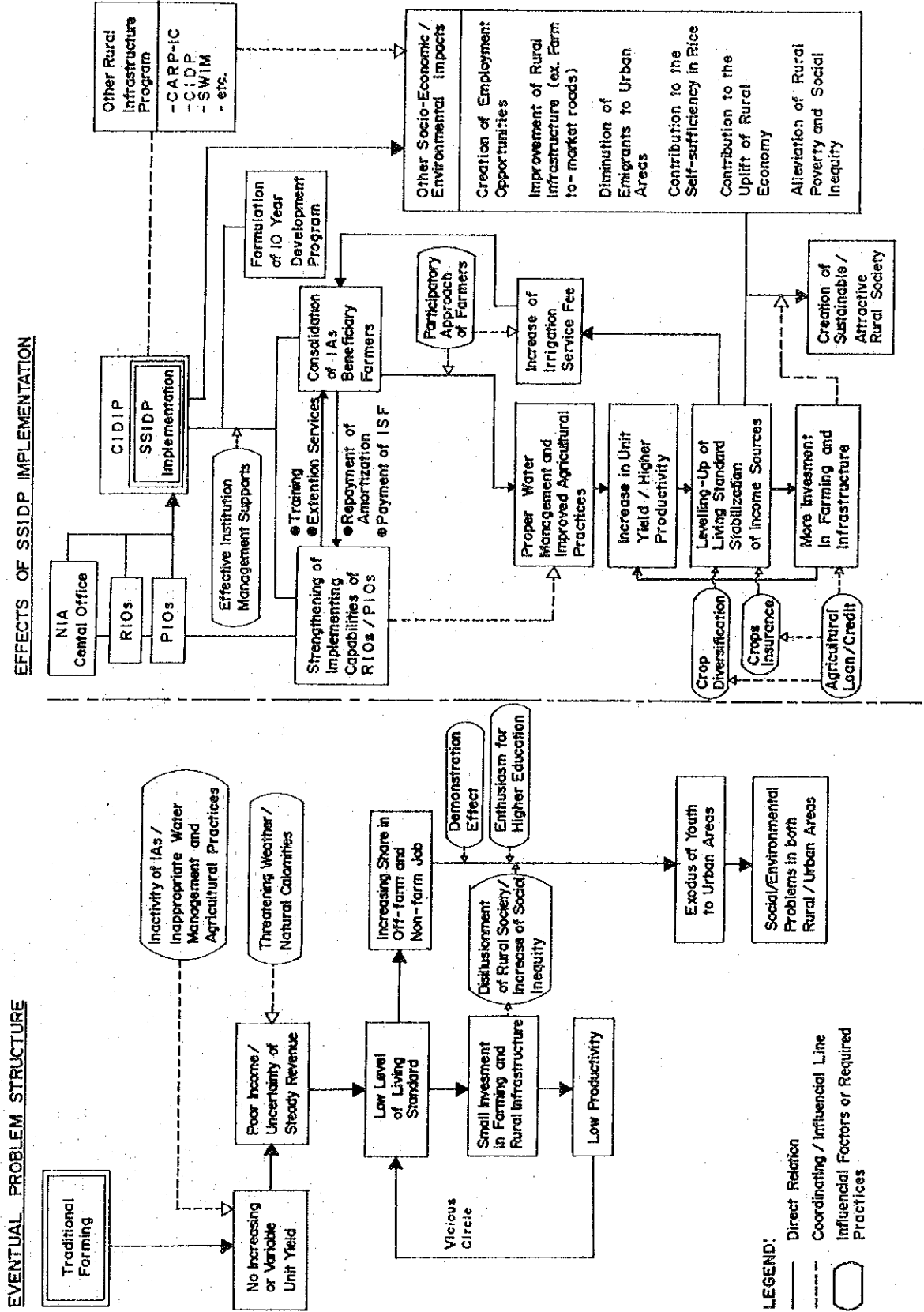
IV. CIPs With Project Condition

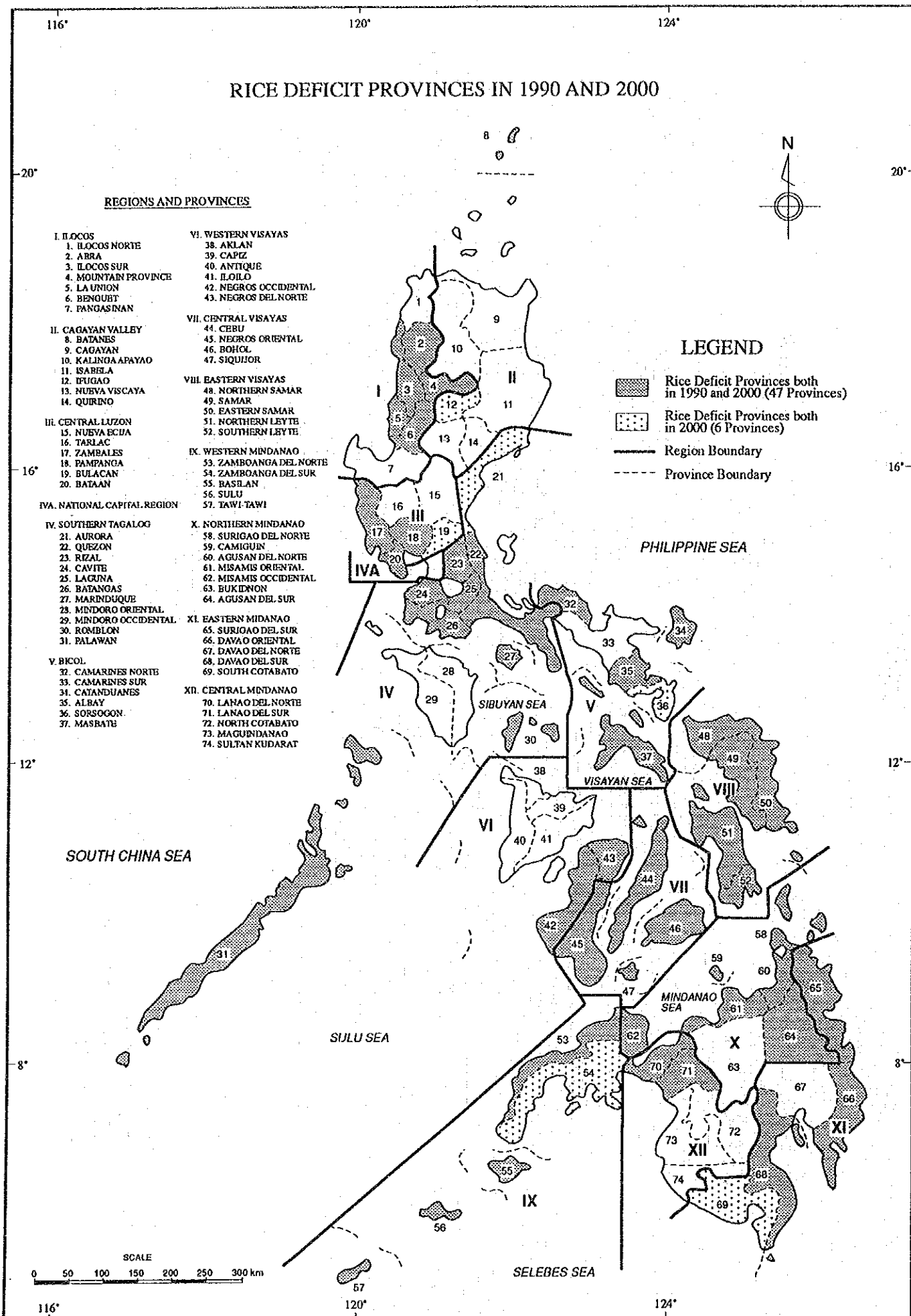


| Legend | Definition of future land use | Definition of the unit yield | Unit Yield of Paddy ton/ha (average) | |
|--------|-------------------------------|------------------------------|--------------------------------------|------------|
| | | | Wet Season | Dry Season |
| | Irrigated Paddy Field | Present Paddy Yield of CISs | 3.6 | 3.6 |

DIAGRAMS OF SOCIO-ECONOMIC IMPACTS

Fig. 11-01





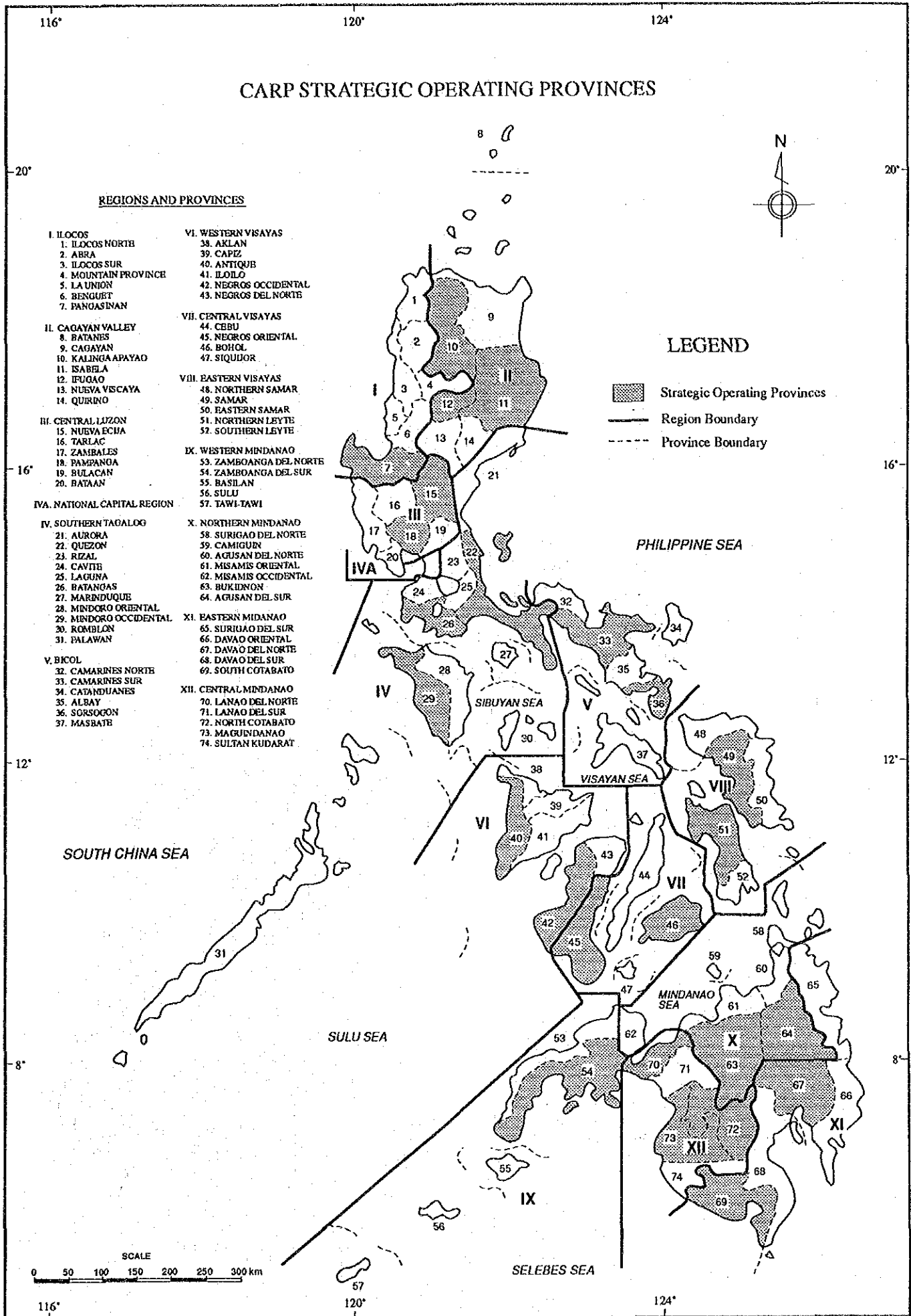


Fig. 11-04

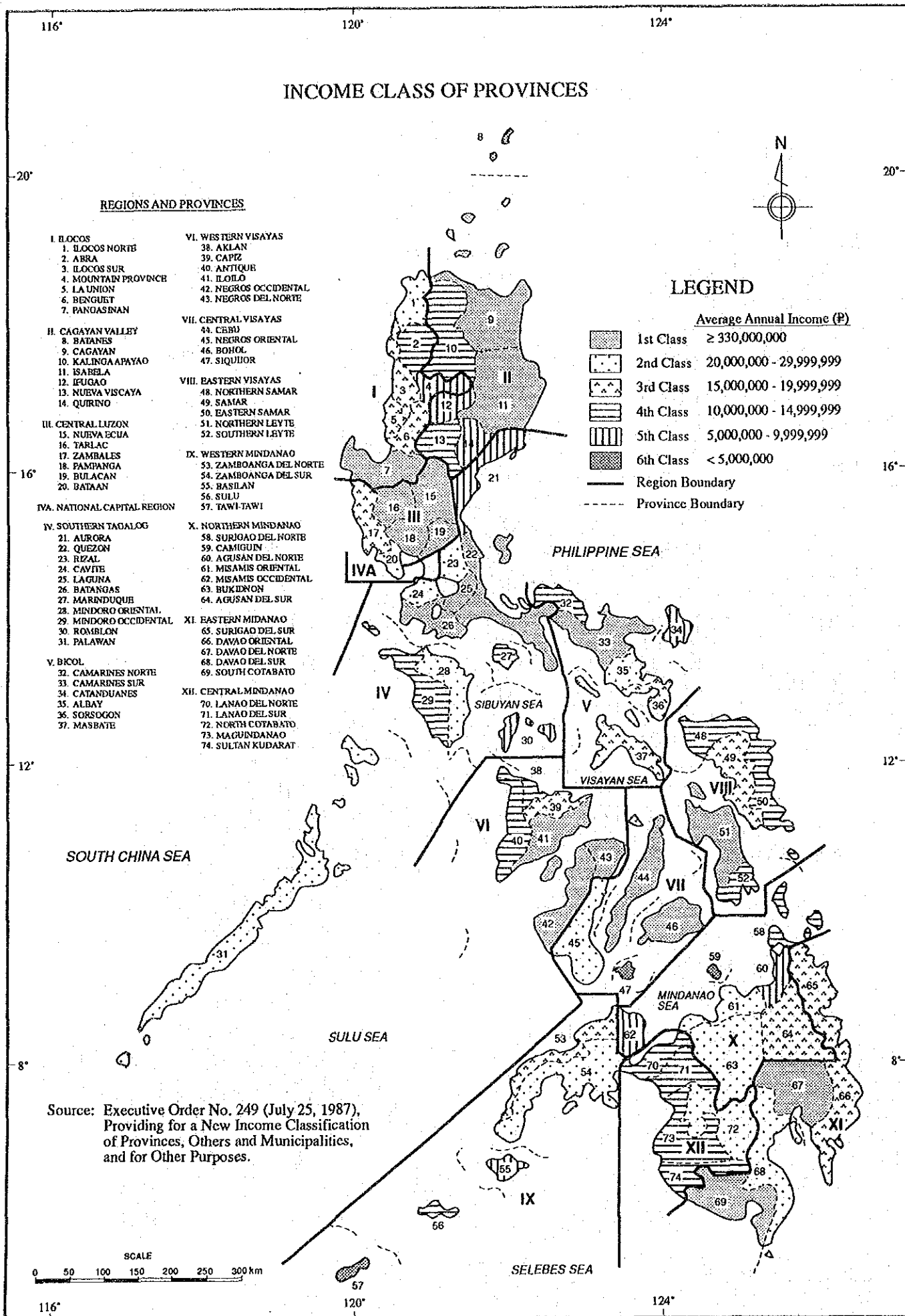
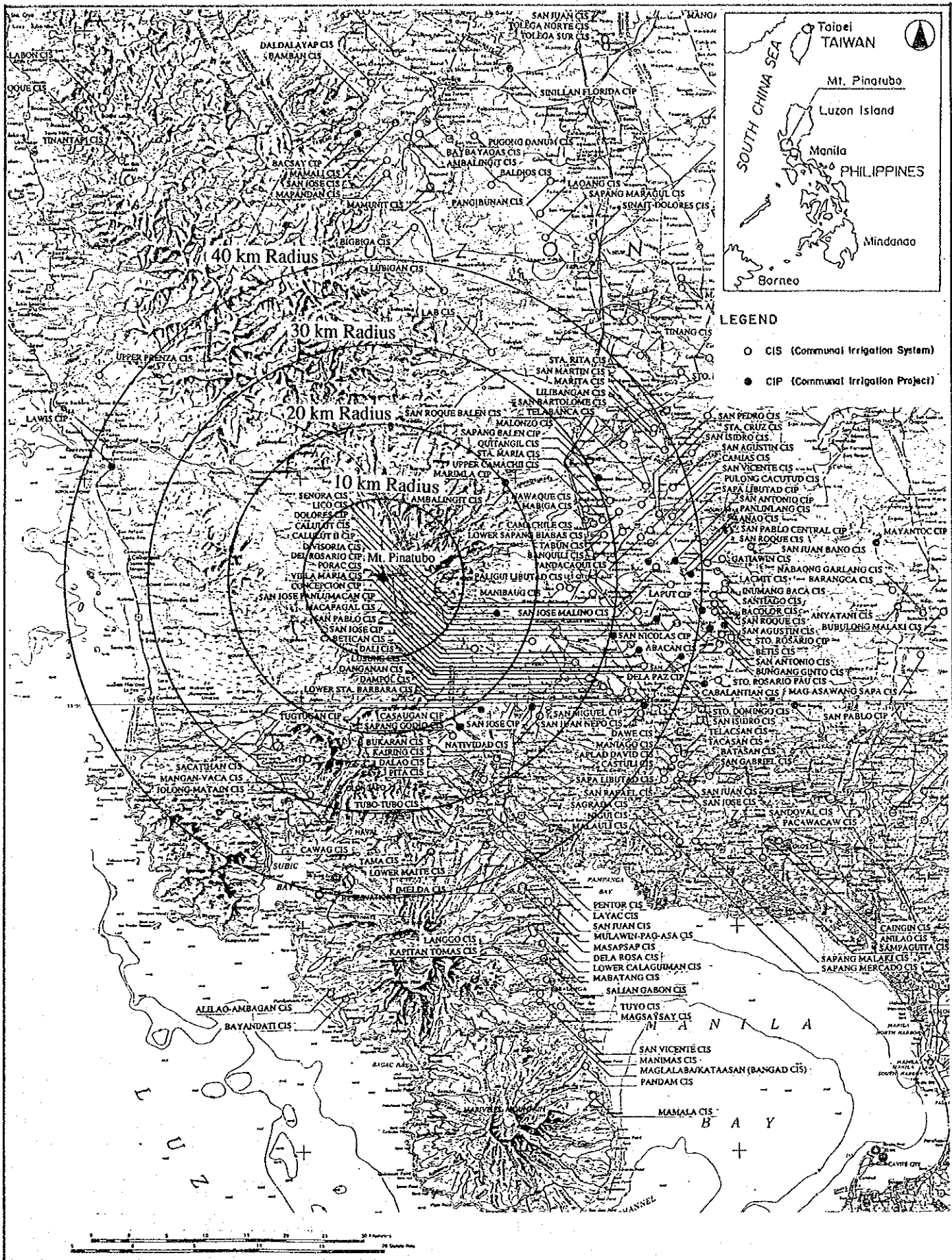


Fig. 12-01



LOCATION MAP OF CISS/CIPs AFFECTED BY ERUPTION OF MT. PINATUBO

ATTACHMENTS

**IMPLEMENTING ARRANGEMENT ON THE TECHNICAL
COOPERATION**

BETWEEN

JAPAN INTERNATIONAL COOPERATION AGENCY

AND

NATIONAL IRRIGATION ADMINISTRATION

FOR THE

MASTER PLAN STUDY

ON THE

SMALL-SCALE IRRIGATION DEVELOPMENT PROJECT

IN

THE REPUBLIC OF THE PHILIPPINES

AGREED UPON

BETWEEN

JAPAN INTERNATIONAL COOPERATION AGENCY

AND

NATIONAL IRRIGATION ADMINISTRATION

MANILA,

FEBRUARY 8, 1990

(signed)

(signed)

MR. JOSE B. DEL ROSARIO, JR.

**ADMINISTRATOR,
NATIONAL IRRIGATION
ADMINISTRATION**

MR. AKIO MOTOSUGI

**LEADER OF THE PRELIMINARY
STUDY TEAM
JAPAN INTERNATIONAL
COOPERATION AGENCY**

I. INTRODUCTION

In response to the request of the Government of the Republic of the Philippines (hereinafter referred to as "GOP"), the Government of Japan (hereinafter referred to as "GOJ") has decided to conduct the Master Plan Study on the Small-Scale Irrigation Development Project in the Republic of the Philippines (hereinafter referred to as "the Study"), and exchanged the Note Verbales with GOP concerning the implementation of the Study.

Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programme of GOJ, will undertake the Study, in accordance with the relevant laws and regulations in force in Japan.

On the part of GOP, National Irrigation Administration (hereinafter referred to as "NIA") shall act as a counterpart agency to the Japanese study team and also as a coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

The present document constitutes the implementing arrangement between JICA and NIA under the above mentioned Note Verbales exchanged between two governments.

II. OBJECTIVES OF THE STUDY

The objective of the Study is to formulate a master plan for the rehabilitation and development of the small-scale irrigation projects hereinafter referred to as "SSIP), aiming at the orderly utilization of the nation's water and land resources.

III. STUDY AREA

The Study area covers the entire Philippines.

IV. SCOPE OF THE STUDY

The Study consists of the following two phases :

Phase I

- (1) Study on current status of SSIP.

Phase II

- (1) Formulation of a project master plan.
- (2) Conduct of preliminary feasibility study on the representative sample sub-projects.

1. Phase I

- (1) Preparation of an inventory of SSIP.
 - 1) Preparatory works for the inventory survey, such as determination of items to be surveyed, preparation of forms for data compilation, etc.
 - 2) Data collection.
 - 3) Data evaluation
 - 4) Final data compilation and data analysis.
- (2) Review and analysis of relevant studies previously conducted and carry out field reconnaissance. These will be conducted in terms of the following aspects.
 - 1) Natural conditions (topography, meteorology, hydrology, geology, soil, etc.)
 - 2) Socio-economic conditions (population, national and local economy, etc.)
 - 3) Agriculture (land use, farming, land ownership, farmers' organizations, farm household economy, processing of agricultural products, marketing, etc.)
 - 4) Agricultural infrastructure (irrigation and drainage, etc.)
 - 5) Others
- (3) Classification of SSIP and preparation of criteria for sub-project screening.
- (4) Preparation of guidelines for project priority ranking.
- (5) Screening of SSIP and priority ranking of sub-projects.

2. Phase II

- (1) Conduct a supplementary field survey and data/information collection.

- (2) Formulation of a project master plan.

This will be composed of the following :

- 1) Long term rehabilitation and development plan of SSIP.
- 2) Improvement plan of NIA's project implementation capability and of farmers' organizations, especially IAs.
- 3) Project implementation plan for SSIP rehabilitation and development, including :
 - a) Selection of representative sample sub-projects;
 - b) Project implementation schedule;
 - c) Project implementation organization;
 - d) Project operation and maintenance system.
- 3) Conduct of preliminary feasibility study on the representative sample sub-projects.

V. REPORTS

JICA shall prepare and submit the following reports in English to GOP.

1. Inception Report
Thirty (30) copies at the commencement of the Phase I Study.
2. Progress Report (I)
Thirty (30) copies at the end of the field work of the Phase I Study.
3. Interim Report
Thirty (30) copies at the end of the home office work of the Phase I Study.
4. Progress Report (II)
Thirty (30) copies at the end of the field work of the Phase II Study.
5. Draft Final Report
Thirty (30) copies within one (1) month following the end of the home office work of the Phase II Study. GOP shall provide JICA with its comments within one (1) month after the receipt of the Draft Final Report.

6. Final Report
Fifty (50) copies within two (2) months after the receipt of the GOPs' comments on the Draft Final Report.

VI. STUDY SCHEDULE

The tentative work schedule is shown in Appendix.

VII. UNDERTAKING OF GOP

In accordance with the Note Verbales exchanged between GOJ and GOP, GOP shall accord privileges, immunities and other benefits to the Japanese study team and, through the authorities concerned, take necessary measures to facilitate smooth conduct of the Study.

1. GOP shall be responsible for dealing with claims which may be brought by the third parties against the members of Japanese study team and shall hold them harmless in respect of claims or liabilities arising in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims or liabilities arise from gross negligence or willful misconduct of the above-mentioned members.
2. NIA shall, at its own expense, provide the Japanese study team with the following, if necessary, in cooperation with other agencies concerned :
 - (1) Available data and information related to the Study;
 - (2) Data and information necessary for the preparation of an inventory of SSIP in Phase I Study;
 - (3) Counterpart personnel;
 - (4) Suitable office space with necessary equipment in Metro Manila;
 - (5) Credential or identification cards to the members of the Japanese study team.
3. NIA shall make necessary arrangement with other governmental and non-governmental organizations concerned for the following :
 - (1) to secure the safety of the Japanese study team;
 - (2) to permit the members of the Japanese study team to enter, leave and sojourn in the Philippines for the duration of their assignment therein;

- (3) to exempt the members of the Japanese study team from taxes, duties, fees and other charges on equipment, machinery and other materials brought into the Philippines for the conduct of the Study;
- (4) to exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any emolument or allowance paid to the members of the Japanese study team for their services in connection with the implementation of the Study;
- (5) to provide necessary facilities to the Japanese study team for remittance as well as utilization of the funds introduced into the Philippines from Japan in connection with the implementation of the Study;
- (6) to secure permission for entry into private properties or restricted areas for the conduct of the Study;
- (7) to secure permission to take all data and documents (including photographs) related to the Study out of the Philippines to Japan by the Study team;
- (8) to provide medical services as needed and its expenses will be chargeable on members of the Japanese study team.

VIII. UNDERTAKING OF GOJ

In accordance with the Note Verbales exchanged between GOJ, and GOP, GOJ, through JICA, shall take the following measures for the implementation of the Study :

1. to dispatch, at its own expense, study teams to the Philippines;
2. to pursue technology transfer to the Philippine counterparts;
3. to provide the necessary equipment for the implementation of the Study, which will remain the property of JICA unless otherwise agreed.



IX. CONSULTATION

JICA and NIA shall consult with each other in respect of any matter that may arise from or in connection with the Study.

TENTATIVE WORK SCHEDULE


| Work Item | Month in Order | | | | | | | | | | | | | | | | | | | |
|--------------------|----------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| PHASE FIELD I | | | | | | | | | | | | | | | | | | | | |
| JAPAN | | | | | | | | | | | | | | | | | | | | |
| PHASE FIELD II | | | | | | | | | | | | | | | | | | | | |
| JAPAN | | | | | | | | | | | | | | | | | | | | |
| Submission of DF/R | | | | | | | | | | | | | | | | | | | | |
| Report | | | | | | | | | | | | | | | | | | | | |

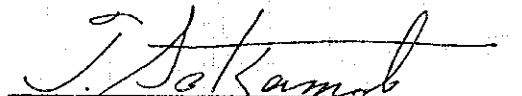
INC/R : Inception Report
 PR/R : Progress Report
 INT/R : Interim Report
 DF/R : Draft Final Report
 F/R : Final Report

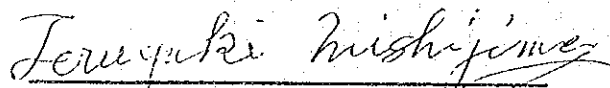
 : Field Work
 : Home Office Work

MINUTES OF MEETINGS
FOR INCEPTION REPORT
ON
MASTER PLAN STUDY
ON
SMALL SCALE IRRIGATION DEVELOPMENT PROJECT
IN
THE REPUBLIC OF THE PHILIPPINES

AUGUST 3, 1990


MR. JOSE B. DEL ROSARIO, JR.
ADMINISTRATOR
NIA


MR. TADASHI SAKAMOTO
TEAM LEADER


WITNESS: DR. TERUYUKI NISHIJIMA
JICA ADVISORY COMMITTEE

1. Date and Time : August 1, 1990 (9:30 am- 11:30 am)
August 2, 1990 (10:00 am- 10:40 am)
2. Place : Conference Room of NIA
3. Attendants : See attached list
4. Summary of Discussion:

The JICA Study Team submitted 30 copies of the Inception Report to NIA on July 30, 1990 and explained the report at the meeting held on August 1, 1990. The second meeting was held on August 2, 1990 at the presence of JICA Advisory Committee members to discuss the inception report more in detail. The following are confirmed through discussions:

- (1) The Inception Report was generally accepted by NIA.
- (2) NIA will provide the Team with the following initial counterpart personnel:

| | | |
|----------------------------|---|------------------------|
| Team Leader | : | Calixto P. Timonera |
| Irrigation and Drainage | : | Virgilio S. Miguel |
| Meteorology and Hydrology | : | Silvino A. Alonzo, Jr. |
| Agriculture | : | Francisco T. Orense |
| Agro-economy/Institution | : | Violeta M. Benico |
| Facility Planning & Design | : | Josias R. Pacolor |
| System Design & Analysis | : | Conrado M. Paredes |

- (3) The Small Scale Irrigation Projects (SSIP) are a kind of communal irrigation system/projects (CIS/CIP) and are defined as those of run-off-river type having irrigation areas of 50 - 500 ha in net. CIS/CIP by pumping and/or those with storage dams (Small Reservoir Irrigation Projects--SRIP) will not be studied as the candidate projects for the Study.
- (4) The inventory survey will be carried out by NIA using the questionnaire prepared by the Study Team and will be completed by the end of September, 1990. The JICA Study Team will explain the details of questionnaire, at the meetings which will be held on August 14 to 16, with the representatives of the NIA provincial offices who will be directly involved in the inventory survey. NIA will make necessary arrangement for the meeting.
- (5) NIA will assign the following personnel as the technical advisors for the Study (the advisors will be fully involved in regular discussions during the course of the Study and other NIA officials may also be involved when the need arises for discussion of important issues such as policy making on SSIP):

| | | |
|--------------------------|---|--|
| Mr. Isidro R. Digal | : | Department Manager Project Development Department |
| Mr. Rodrigo N. de Guzman | : | Division Manager Communal Irrigation Department |

- (6) NIA will provide the Study Team with the office furnished with adequate number of desks and chairs at 5th floor of DCIEC building, ID card for the Team members and all the existing documents required for the Study. All the counterpart personnel will work at the same office together with the Team.

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LIST OF ATTENDANTS

NIA

- | | |
|---------------------------|---|
| 1. Isidro R. Digal | PDD Manager |
| 2. Rodrigo de Guzman | Division Manager |
| 3. Calixto P. Timonera | Counterpart Team Leader |
| 4. Virgilio S. Miguel | Sr. Engineer A |
| 5. Francisco T. Orense | Sr. Agronomist |
| 6. Conrado M. Paredes | Sr. Engineer A |
| 7. Violeta M. Benico | Management Info Systems Design Specialist |
| 8. Silvino A. Alonzo, Jr. | Sr. Hydrologist |

JICA

- | | |
|-----------------------|--------------------------------|
| 1. Teruyuki NISHIJIMA | JICA Advisory Committee Member |
| 2. Atushi HANATANI | JICA Headquarters |
| 3. Sumio OISHI | JICA Expert, NIA |
| 4. Yukinori OUCHI | JICA Expert, NIA |
| 5. Fumio KIKUCHI | JICA Philippine Office |

JICA Study Team

- | | |
|--------------------------|------------------------------|
| 1. Tadashi SAKAMOTO | Leader |
| 2. Naoki ARIGA | Project Planning (Co-Leader) |
| 3. Toshikazu HIGASHIKAWA | Irrigation and Drainage |
| 4. Takuya IGAWA | System Design and Analysis |
| 5. W.S. Mirasol | Agro-Economy/Institution |



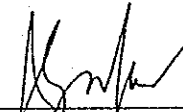
MINUTES OF MEETING
FOR DISCUSSION OF INITIAL WORK PROGRESS
ON
SMALL SCALE IRRIGATION DEVELOPMENT PROJECT (SSIDP)

1. DATE AND TIME : October 18, 1990
9:15 am- 10:40 am
2. PLACE : Conference Room of NIA
3. ATTENDANTS : See attached list
4. SUMMARY OF DISCUSSION:

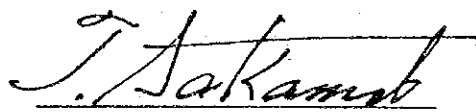
The JICA Study Team prepared the "Explanatory Note on Initial Work Progress" which deals with the major activities during the period of July 30 - September 30, 1990 and explained the Note at the meeting held on October 18, 1990. The following are confirmed through discussions:

- (1) The "Provincial Irrigation Profiles" were prepared by NIA and printed by NIA Consult.
- (2) The average development cost per ha generally depends upon the kinds of facilities constructed and that of about ₱8,500 mentioned on page 12 of the Explanatory Note seems to be too small. The relatively low development cost per ha might have been caused by the limited construction of facilities induced by the shortage of budget allocation in the past years. The JICA Study Team was requested to examine the relationship between the average development cost per ha and availability of the allocated budget.
- (3) The JICA Study Team was requested, after completion of the Study, to transfer the computerized database together with the special computer programs for data entry, printing, checking and analysis which will be used for master plan study, to the Communal Irrigation Department of NIA for continuous use and updating of such database for daily management of CISOs/CIPs. The JICA Study Team said that the request would be conveyed to the JICA head office.
- (4) NIA has a policy that only one set of selection criteria shall be applied to all kinds of CISOs/CIPs regardless of funding sources. However if any possible room for improvement is deemed necessary as a result of the inventory survey, the JICA Study Team will make appropriate recommendations on this.
- (5) NIA said that the cropping intensity of 130% mentioned in the Minimum Selection Criteria shall be maintained because according to the analysis by NIA, it generally indicates the marginal economic viability of the candidate sub-projects. The JICA Study Team will study the adequacy of 130% cropping intensity for the Minimum Selection Criteria.

- (6) The required guidelines for a package plan will be prepared under the master plan study, in due consideration of the prospective criteria for priority ranking and categories of sub-projects.
- (7) NIA will provide the Study Team with the recently prepared formula of regional/provincial budget allocation in which NIA's policy on priority ranking for implementation of CIPs/CISs is reflected.
- (8) The master plan study is intended to provide the framework plan for overall CIPs/CISs development in the future (for 50 - 500 ha range). The master plan shall cover the period of 1993 - 2002.
- (9) NIA emphasized the importance of the SSIDP master plan study and requested the JICA Study Team to pay more attention to transfer of knowledge to the counterpart personnel during the process of the master plan study.
- (10) The JICA Study Team said that the delayed submission of the filled-out questionnaires would affect the time schedule of Phase-I field work (about 2,500 questionnaires have been returned by 34 PIOs, as of October 17, 1990) and therefore requested NIA to take necessary actions for PIOs to submit all the filled-out questionnaires by the end of October, 1990.



JOSE A. GALVEZ
Assistant Administrator



TADASHI SAKAMOTO
Team Leader

LIST OF ATTENDANTS

NIA

- | | | |
|-----|--------------------------|----------------------------------|
| 1. | Jose A. Galvez | Assistant Administrator for SOEM |
| 2. | Isidro R. Digal | PDD Manager |
| 3. | Rodrigo de Guzman | Division Manager |
| 4. | Calixto Timonera | Counterpart Team Leader |
| 5. | Francisco T. Orense | Agriculture |
| 6. | Conrado M. Paredes | System Design and Analysis |
| 7. | Violeta M. Benico | Agro-economy and Institution |
| 8. | Silvino A. Alonzo, Jr. | Meteorology and Hydrology |
| 9. | Adonis C. Beringuela | Facility Planning and Design |
| 10. | Epifanio G. Gacusan, Jr. | Facility Design |

JICA Expert, NIA

- | | | |
|----|----------------|------------------|
| 1. | Sumio OISHI | JICA Expert, NIA |
| 2. | Yukinori OUCHI | JICA Expert, NIA |

JICA Study Team

- | | | |
|----|-----------------------|-----------------------------------|
| 1. | Tadashi SAKAMOTO | Leader |
| 2. | Naoki ARIGA | Project Planning (Co-Leader) |
| 3. | Toshikazu HIGASHIKAWA | Irrigation & Drainage |
| 4. | Hisashi IKEWADA | Agriculture |
| 5. | Yukihiro KAWAHARA | Design Engineer |
| 6. | Kunita OKUWA | Hydrologist |
| 7. | Takuya IGAWA | System Design and Analysis Expert |
| 7. | W.S. MIRASOL | Agro-Economy/Institution |