

```

i*****
* PROCEDURE NAME : MENUL.PRG
* DESCRIPTION : MAIN MENU OF DATA STORAGE & RETRIEVAL
* PROCEDURE : MEN_CREA, M_CASES, SAWA_MNU, RAWA_MNU, GW_MNU
* PRINTSET, PRNTRTRY, ERRPAUSE, PRTSTP, PRMSG
* PREPARED BY : Takuya IGAWA, JICA FIDP Team
* PREPARED ON : August 8, 1993
*****

IF SET("TALK") = "ON"
  SET TALK OFF
  lc_talk = "ON"
ELSE
  lc_talk = "OFF"
ENDIF

lc_cursor = SET("CURSOR")
SET CURSOR ON

lc_status = SET("STATUS")
IF lc_status = "ON"
  SET STATUS OFF
ENDIF

SET SCOREBOARD OFF
set safety off
set bell on
set confirm on

DEFINE WINDOW COVER FROM 0,0 TO 24,79 NONE
DEFINE WINDOW PAUSE FROM 15,00 TO 21,79 DOUBLE

STORE .T. TO LOOPA, LOOPB
*IF ISCOLOR()
* SET COLOR TO GR+/B,N/BG
* SET COLOR OF BOX TO GR+/B
*ENDIF
*IF ISCOLOR()
* COL1='SET COLOR TO W/R'
* COL2='SET COLOR TO R/W'
* COL0='SET COLOR TO W/B'
*ELSE
* COL0='SET COLOR TO '
* COL1='SET COLOR TO N/W'
* COL2='SET COLOR TO N/W'
*ENDIF
CLEAR
@ 1, 20 SAY 'JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)'
@ 3, 20 SAY 'Formulation of Irrigation Development Program'
&COL1
@ 23,15 SAY 'To Select Item, Use '+CHR(24)+' '+CHR(25)+' Key and Press <ENTER> Key'
&COL0
DO MEN_CREA
ACTIVATE POPUP MAIN
IF lc_status = "OFF"
  SET STATUS OFF
ENDIF
SET CURSOR &lc_cursor
SET TALK &lc_talk
CLEAR ALL
CLEAR
RETURN

*****
FUNCTION CENT_STR
*****
PARAMETERS STRING, STLEN
PRIVATE RET_VAL, LPAD, TPAD
LPAD = INT((STLEN-LEN(LTRIM(TRIM(STRING))))/2)
TPAD = STLEN - LPAD - LEN(LTRIM(TRIM(STRING)))
RET_VAL = SPACE(LPAD) + LTRIM(TRIM(STRING)) + SPACE(TPAD)
RETURN RET_VAL

*****
PROC MEN_CREA
*****
* PROCEDURE NAME : MEN_CREA
* DESCRIPTION : DEFINE POPUP MENU TO SELECT KIND OF SCHEME IN DATA STRAGE & RETRIEVAL SUB-SYSTEM

```

Sample of Computer Program  
Main Menu Control Program

```

DEFINE POPUP MAIN FROM 6,20 TO 20,60
DEFINE BAR 2 OF MAIN PROMPT CENT_STR("Data Strage and Retrieval",39) SKIP
DEFINE BAR 3 OF MAIN PROMPT REPL(CHR(205),39) SKIP
DEFINE BAR 5 OF MAIN PROMPT CENT_STR("Surface Irrigation",39);
MESSAGE "Add, correct, browse, delete and print records of Surface Irrigation"
DEFINE BAR 7 OF MAIN PROMPT CENT_STR("Swamp Irrigation",39);
MESSAGE "Add, correct, browse, delete and print records of Swamp Irrigation"
DEFINE BAR 9 OF MAIN PROMPT CENT_STR("Groundwater Irrigation",39);
MESSAGE "Add, correct, browse, delete and print records of Groundwater"
DEFINE BAR 11 OF MAIN PROMPT CENT_STR("Quit",39);
MESSAGE "Terminate this program and go back to the DOT prompt"
ON SELECTION POPUP MAIN DO M_CASES
*

DEFINE POPUP sawa FROM 4,10 TO 20,30
DEFINE BAR 2 OF sawa PROMPT CENT_STR("Surface",19) SKIP
DEFINE BAR 3 OF sawa PROMPT REPL(CHR(205),39) SKIP
DEFINE BAR 5 OF sawa PROMPT CENT_STR("Add records",19);
MESSAGE "ADD questionnaire records of Surface Irrigation Scheme"
DEFINE BAR 7 OF sawa PROMPT CENT_STR("Correct records",19);
MESSAGE "CORRECT questionnaire records of Surface Irrigation Scheme"
DEFINE BAR 9 OF sawa PROMPT CENT_STR("Browse records",19);
MESSAGE "BROWSE questionnaire records of Surface Irrigation Scheme"
DEFINE BAR 11 OF sawa PROMPT CENT_STR("Delete records",19);
MESSAGE "DELETEE questionnaire records of Surface Irrigation Scheme"
DEFINE BAR 13 OF sawa PROMPT CENT_STR("Print records",19);
MESSAGE "PRINT questionnaire records of Surface Irrigation Scheme"
DEFINE BAR 15 OF sawa PROMPT CENT_STR("Return",19);
MESSAGE "RETURN to main menu"
ON SELECTION POPUP SAWA DO SAWA_MNU
*

DEFINE POPUP rawa FROM 6,20 TO 22,40
DEFINE BAR 2 OF rawa PROMPT CENT_STR("Swamp",19) SKIP
DEFINE BAR 3 OF rawa PROMPT REPL(CHR(205),39) SKIP
DEFINE BAR 5 OF rawa PROMPT CENT_STR("Add records",19);
MESSAGE "ADD questionnaire records of Swamp Irrigation Scheme"
DEFINE BAR 7 OF rawa PROMPT CENT_STR("Correct records",19);
MESSAGE "CORRECT questionnaire records of Swamp Irrigation Scheme"
DEFINE BAR 9 OF rawa PROMPT CENT_STR("Browse records",19);
MESSAGE "BROWSE questionnaire records of Swamp Irrigation Scheme"
DEFINE BAR 11 OF rawa PROMPT CENT_STR("Delete records",19);
MESSAGE "DELETEE questionnaire records of Swamp Irrigation Scheme"
DEFINE BAR 13 OF rawa PROMPT CENT_STR("Print records",19);
MESSAGE "PRINT questionnaire records of Swamp Irrigation Scheme"
DEFINE BAR 15 OF rawa PROMPT CENT_STR("Return",19);
MESSAGE "RETURN to main menu"
ON SELECTION POPUP RAWA DO RAWA_MNU
*

DEFINE POPUP gw FROM 6,50 TO 22,70
DEFINE BAR 2 OF gw PROMPT CENT_STR("Groundwater",19) SKIP
DEFINE BAR 3 OF gw PROMPT REPL(CHR(205),39) SKIP
DEFINE BAR 5 OF gw PROMPT CENT_STR("Add records",19);
MESSAGE "ADD questionnaire records of Groundwater Irrigation Scheme"
DEFINE BAR 7 OF gw PROMPT CENT_STR("Correct records",19);
MESSAGE "CORRECT questionnaire records of Groundwater Irrigation Scheme"
DEFINE BAR 9 OF gw PROMPT CENT_STR("Browse records",19);
MESSAGE "BROWSE questionnaire records of Groundwater Irrigation Scheme"
DEFINE BAR 11 OF gw PROMPT CENT_STR("Delete records",19);
MESSAGE "DELETEE questionnaire records of Groundwater Irrigation Scheme"
DEFINE BAR 13 OF gw PROMPT CENT_STR("Print records",19);
MESSAGE "PRINT questionnaire records of Groundwater Irrigation Scheme"
DEFINE BAR 15 OF gw PROMPT CENT_STR("Return",19);
MESSAGE "RETURN to main menu"
ON SELECTION POPUP GW DO GW_MNU

RETURN
* End-of-procedure : MEN_CREA
*=====
PROC M_CASES
*=====
* PROCEDURE NAME : MEN_CREA
* DESCRIPTION : CONTROL POPUP MENU TO SELECT KIND OF SCHEME IN DATA STRAGE & RETRIEVAL SUB-
SYSTEM

DO CASE
CASE BAR() = 5
ACTIVATE POPUP SAWA
CASE BAR() = 7

```

Sample of Computer Program  
Main Menu Control Program

```
        ACTIVATE POPUP RAWA
CASE BAR() = 9
        ACTIVATE POPUP GW
CASE BAR() = 11
        DEACTIVATE POPUP
ENDCASE
RETURN
* End-of-procedure : M_CASES
*=====
PROC SAWA_MNU
*=====
* PROCEDURE NAME : SAWA_MNU
* DESCRIPTION   : CONTROL POPUP MENU TO SELECT MENU ITEM IN SURFACE IRRIGATION SCHEME

DO CASE
CASE BAR() = 5
    DO SREG
CASE BAR() = 7
    DO SCOR
CASE BAR() = 9
    DO SREF
CASE BAR() = 11
    DO SDEL
CASE BAR() = 13
    DO SPRT
CASE BAR() = 15
    DEACTIVATE POPUP
RETURN
ENDCASE
RETURN
* End-of-procedure : SAWA_MNU
*=====
PROC RAWA_MNU
*=====
* PROCEDURE NAME : RAWA_MNU
* DESCRIPTION   : CONTROL POPUP MENU TO SELECT MENU ITEM IN SWAMP IRRIGATION SCHEME

DO CASE
CASE BAR() = 5
    DO RREG
CASE BAR() = 7
    DO RCOR
CASE BAR() = 9
    DO RREF
CASE BAR() = 11
    DO SDEL
CASE BAR() = 13
    DO RPRT
CASE BAR() = 15
    DEACTIVATE POPUP
RETURN
ENDCASE
RETURN
* End-of-procedure : RAWA_MNU
*=====
PROC GW_MNU
*=====
* PROCEDURE NAME : GW_MNU
* DESCRIPTION   : CONTROL POPUP MENU TO SELECT MENU ITEM IN GROUNDWATER IRRIGATION SCHEME

DO CASE
CASE BAR() = 5
    DO GREG
CASE BAR() = 7
    DO GCOR
CASE BAR() = 9
    DO GREF
CASE BAR() = 11
    DO SDEL
CASE BAR() = 13
    DO GPRT
CASE BAR() = 15
    DEACTIVATE POPUP
RETURN
ENDCASE
RETURN
* End-of-procedure : GW_MNU
*=====
PROC printset
```

Sample of Computer Program  
Main Menu Control Program

```

=====
* PROCEDURE NAME : PRINTSET
* DESCRIPTION   : PROMPT USER TO BE SURE PRINTER IS IN ON-LINE WHEN IT IS IN OFF-LINE
PARAMETER ok
gn_pkey = 0
DEFINE WINDOW printemp FROM 08,25 to 17,56
IF .NOT. LASTKEY() = 27
  ON ERROR DO prnrtry WITH ok
  IF gn_pkey <> 27
    SET DEVICE TO PRINT
  ENDIF
  ON ERROR
ENDIF
RELEASE WINDOW printemp
RETURN
* End-of-procedure : PRINTSET
=====
PROC prnrtry
=====
* PROCEDURE NAME : PRNRTRY
* DESCRIPTION   : PROMPT USER TO BE SURE PRINTER IS IN ON-LINE WHEN IT IS IN OFF-LINE
PARAMETER ok
PRIVATE lc_escape
lc_escape = SET("ESCAPE")
IF .NOT. PRINTSTATUS()
  IF lc_escape = 'ON'
    SET ESCAPE OFF
  ENDIF
  gn_pkey = 0
  ACTIVATE WINDOW printemp
  @ 1, 0 SAY 'Please ready your printer or'
  @ 2, 0 SAY '      press ESC to cancel'
  DO WHILE ( .NOT. PRINTSTATUS()) .AND. gn_pkey <> 27
    gn_pkey = INKEY()
  ENDDO
  DEACTIVATE WINDOW printemp
  SET ESCAPE &lc_escape
  IF gn_pkey <> 27
    RETRY
  ELSE
    ok = .F.
  ENDIF
ENDIF
RETURN
* End-of-procedure : PRNRTRY
=====
PROC errpause
=====
* PROCEDURE NAME : ERRPAUSE
* DESCRIPTION   : DISPLAY MESSAGE WHEN ERROR OCCURS
PARAMETER errmsg1,errmsg2
ACTIVATE WINDOW Pause
? CHR(7)
@ 00, 25 SAY '<<<<< ERROR MESSAGE >>>>>'
@ 01, 01 SAY errmsg1
@ 02, 01 SAY errmsg2
WAIT ' Press any key to continue'
DEACTIVATE WINDOW Pause
RETURN
* End-of-procedure : ERRPAUSE
=====
PROC prtstp
=====
* PROCEDURE NAME : PRTSTP
* DESCRIPTION   : CANCEL PRINTING
@ prow()+1, 0 say chr(18)
EJECT
SET DEVICE TO SCREEN
ACTIVATE WINDOW Pause
? CHR(7)
@ 01, 25 SAY '<<<<< PRINT CANCEL >>>>>'
@ 03, 25 SAY ' All process is cancelled'
WAIT ' Press any key to continue'

DEACTIVATE WINDOW Pause
CLOSE DATABASES
DEACTIVATE WINDOW COVER
*DEACTIVATE POPUP
*RELEASE ALL

```

```

*CLOSE ALL
*CLEAR
RETURN TO MASTER

* End-of-procedure : PRTSTP
*=====
PROC prtmsg
*=====
* PROCEDURE NAME : PRMSG
* DESCRIPTION    : DISPLAY MESSAGE WHILE PRINTING
PARAMETER OK
IF OK
  ACTIVATE WINDOW Pause
  @ 01, 25 SAY '<<<<<< PRINTING >>>>>>'
  @ 02, 00 SAY 'Press <Esc> to cancel print'
ELSE
  DEACTIVATE WINDOW Pause
ENDIF
RETURN
* End-of-procedure : PRMSG

* EOF OF MENU1.PRG

*****
* PROCEDURE NAME : MENU2.PRG
* DESCRIPTION    : MAIN MENU OF PRINT REPORT
* PROCEDURE      : MEN_CREA,M_CASES
* REGION,MNU_01,MNU_03,MNU_05,MNU_06,MNU_07,MNU_08
* REGION_1,REGION_3,REGION_5,REGION_6,REGION_7,REGION_8
* MNU_S,ACTION_S,MNU_R,ACTION_R,MNU_G,ACTION_G
* PRINTSET,PRNTFRTRY,ERRPAUSE,PRTSTP,PRMSG
* PREPARED BY    : Takuya IGAWA, JICA FIDP Team
* PREPARED ON    : August 4, 1993
*****

IF SET("TALK") = "ON"
  SET TALK OFF
  lc_talk = "ON"
ELSE
  lc_talk = "OFF"
ENDIF

lc_cursor = SET("CURSOR")
SET CURSOR ON

lc_status = SET("STATUS")
IF lc_status = "ON"
  SET STATUS OFF
ENDIF

SET SCOREBOARD OFF
set safety off
set bell on
set confirm on

DEFINE WINDOW COVER FROM 0,0 TO 24,79 NONE
DEFINE WINDOW PAUSE FROM 15,00 TO 21,79 DOUBLE

STORE .T. TO LOOPA,LOOPB
*IF ISCOLOR()
* SET COLOR TO GR+/B,N/BG
* SET COLOR OF BOX TO GR+/B
*ENDIF
*IF ISCOLOR()
* COL1='SET COLOR TO W/R'
* COL2='SET COLOR TO R/W'
* COLO='SET COLOR TO W/B'
*ELSE
  COLO='SET COLOR TO'
  COL1='SET COLOR TO N/W'
  COL2='SET COLOR TO N/W'
*ENDIF
CLEAR
@ 1, 20 SAY 'JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)'
@ 3, 20 SAY 'Formulation of Irrigation Development Program'
&COL1
@ 23,15 SAY 'To Select Item, Use '+CHR(24)+' '+CHR(25)+' Key and Press <ENTER> Key'
&COLO
DO MEN_CREA

```

Sample of Computer Program  
Main Menu Control Program

```
ACTIVATE POPUP MAIN
IF lc_status = "OFF"
  SET STATUS OFF
ENDIF
SET CURSOR &lc_cursor
SET TALK &lc_talk
CLEAR ALL
CLEAR
RETURN
```

```
*=====
FUNCTION CENT_STR
```

```
* FUNCTION NAME : CENT_STR
* DESCRIPTION : ALIGN STRING CENTER
PARAMETERS STRING,STLEN
PRIVATE RET_VAL,LPAD,TPAD
LPAD = INT((STLEN-LEN(LTRIM(TRIM(STRING))))/2)
TPAD = STLEN - LPAD - LEN(LTRIM(TRIM(STRING)))
RET_VAL = SPACE(LPAD) + LTRIM(TRIM(STRING)) + SPACE(TPAD)
RETURN RET_VAL
* End-of-procedure : CENT_STR
```

```
*=====
PROC MEN_CREA
```

```
* PROCEDURE NAME : MEN_CREA
* DESCRIPTION : DEFINE POPUP MENU TO SELECT TYPE OF SCHEME AND REGION IN PRINT REPORT SUB-SYSTEM
```

```
DEFINE POPUP MAIN FROM 6,20 TO 20,60
DEFINE BAR 2 OF MAIN PROMPT CENT_STR("Print Report",39) SKIP
DEFINE BAR 3 OF MAIN PROMPT REPL(CHR(205),39) SKIP
DEFINE BAR 5 OF MAIN PROMPT CENT_STR("Surface Irrigation",39);
  MESSAGE "Print Reports for Surface Irrigation Scheme"
DEFINE BAR 7 OF MAIN PROMPT CENT_STR("Swamp Irrigation",39);
  MESSAGE "Print Reports for Swamp Irrigation Scheme"
DEFINE BAR 9 OF MAIN PROMPT CENT_STR("Groundwater Irrigation",39);
  MESSAGE "Print Reports for Groundwater Scheme"
DEFINE BAR 11 OF MAIN PROMPT CENT_STR("Quit",39);
  MESSAGE "Terminate this program and go back to the DOT prompt"
ON SELECTION POPUP MAIN DO M_CASES
```

\*

```
DEFINE POPUP sawa FROM 3,10 TO 22,30
DEFINE BAR 2 OF sawa PROMPT CENT_STR("Surface",19) SKIP
DEFINE BAR 3 OF sawa PROMPT REPL(CHR(205),39) SKIP
DEFINE BAR 5 OF sawa PROMPT CENT_STR("Sumatera",19);
  MESSAGE "Print Reports for Surface Irrigation Scheme in Sumatera"
DEFINE BAR 7 OF sawa PROMPT CENT_STR("Jawa",19);
  MESSAGE "Print Reports for Surface Irrigation Scheme in Jawa"
DEFINE BAR 9 OF sawa PROMPT CENT_STR("Bali & NT",19);
  MESSAGE "Print Reports for Surface Irrigation Scheme in Bali & Nusa Tenggara"
DEFINE BAR 11 OF sawa PROMPT CENT_STR("Kalimantan",19);
  MESSAGE "Print Reports for Surface Irrigation Scheme in Kalimantan"
DEFINE BAR 13 OF sawa PROMPT CENT_STR("Sulawesi",19);
  MESSAGE "Print Reports for Surface Irrigation Scheme in Sulawesi"
DEFINE BAR 15 OF sawa PROMPT CENT_STR("Maluku & IJ",19);
  MESSAGE "Print Reports for Surface Irrigation Scheme in Maluku & Iriyan Jaya"
DEFINE BAR 17 OF sawa PROMPT CENT_STR("Return",19);
  MESSAGE "RETURN to Print Report Main Menu"
ON SELECTION POPUP SAWA DO REGION
```

\*

```
DEFINE POPUP rawa FROM 3,10 TO 22,30
DEFINE BAR 2 OF rawa PROMPT CENT_STR("Swamp",19) SKIP
DEFINE BAR 3 OF rawa PROMPT REPL(CHR(205),39) SKIP
DEFINE BAR 5 OF rawa PROMPT CENT_STR("Sumatera",19);
  MESSAGE "Print Reports for Swamp Irrigation Scheme in Sumatera"
DEFINE BAR 7 OF rawa PROMPT CENT_STR("Jawa",19);
  MESSAGE "Print Reports for Swamp Irrigation Scheme in Jawa"
DEFINE BAR 9 OF rawa PROMPT CENT_STR("Bali & NT",19);
  MESSAGE "Print Reports for Swamp Irrigation Scheme in Bali & Nusa Tenggara"
DEFINE BAR 11 OF rawa PROMPT CENT_STR("Kalimantan",19);
  MESSAGE "Print Reports for Swamp Irrigation Scheme in Kalimantan"
DEFINE BAR 13 OF rawa PROMPT CENT_STR("Sulawesi",19);
  MESSAGE "Print Reports for Swamp Irrigation Scheme in Sulawesi"
DEFINE BAR 15 OF rawa PROMPT CENT_STR("Maluku & IJ",19);
  MESSAGE "Print Reports for Swamp Irrigation Scheme in Maluku & Iriyan Jaya"
DEFINE BAR 17 OF rawa PROMPT CENT_STR("Return",19);
  MESSAGE "RETURN to Print Report Main Menu"
ON SELECTION POPUP RAWA DO REGION
```

```

*
DEFINE POPUP gw FROM 3,10 TO 22,30
DEFINE BAR 2 OF gw PROMPT CENT_STR("Groundwater",19) SKIP
DEFINE BAR 3 OF gw PROMPT REPL(CHR(205),39) SKIP
DEFINE BAR 5 OF gw PROMPT CENT_STR("Sumatera",19);
  MESSAGE "Print Reports for Groundwater Irrigation Scheme in Sumatera"
DEFINE BAR 7 OF gw PROMPT CENT_STR("Jawa",19);
  MESSAGE "Print Reports for Groundwater Irrigation Scheme in Jawa"
DEFINE BAR 9 OF gw PROMPT CENT_STR("Bali & NT",19);
  MESSAGE "Print Reports for Groundwater Irrigation Scheme in Bali & Nusa Tenggara"
DEFINE BAR 11 OF gw PROMPT CENT_STR("Kalimantan",19);
  MESSAGE "Print Reports for Groundwater Irrigation Scheme in Kalimantan"
DEFINE BAR 13 OF gw PROMPT CENT_STR("Sulawesi",19);
  MESSAGE "Print Reports for Groundwater Irrigation Scheme in Sulawesi"
DEFINE BAR 15 OF gw PROMPT CENT_STR("Maluku & IJ",19);
  MESSAGE "Print Reports for Groundwater Irrigation Scheme in Maluku & Iriyan Jaya"
DEFINE BAR 17 OF gw PROMPT CENT_STR("Return",19);
  MESSAGE "RETURN to Print Report Main Menu"
ON SELECTION POPUP gw DO REGION
*

RETURN
* End-of-procedure : MEN_CREA

*=====
PROC M_CASES
*=====
* PROCEDURE NAME : MEN_CASES
* DESCRIPTION : CONTROL POPUP MENU TO SELECT TYPE OF SCHEME IN PRINT REPORT SUB-SYSTEM
DO CASE
  CASE BAR() = 5
    MODULE = 'MNU_S'
    ACTIVATE POPUP SAWA
  CASE BAR() = 7
    MODULE = 'MNU_R'
    ACTIVATE POPUP RAWA
  CASE BAR() = 9
    MODULE = 'MNU_G'
    ACTIVATE POPUP GW
  CASE BAR() = 11
    DEACTIVATE POPUP
    RELEASE POPUP SAWA
    RELEASE POPUP RAWA
    RELEASE POPUP GW
ENDCASE
RETURN
* End-of-procedure : MEN_CASES

*=====
PROC REGION
*=====
* PROCEDURE NAME : REGION
* DESCRIPTION : CONTROL POPUP MENU TO SELECT REGION TO PRINT
DO CASE
  CASE BAR() = 5
    DO MNU_01
    ACTIVATE POPUP MNU_01
  CASE BAR() = 7
    DO MNU_03
    ACTIVATE POPUP MNU_03
  CASE BAR() = 9
    DO MNU_05
    ACTIVATE POPUP MNU_05
  CASE BAR() = 11
    DO MNU_06
    ACTIVATE POPUP MNU_06
  CASE BAR() = 13
    DO MNU_07
    ACTIVATE POPUP MNU_07
  CASE BAR() = 15
    DO MNU_08
    ACTIVATE POPUP MNU_08
  CASE BAR() = 17
    DEACTIVATE POPUP
    RETURN
ENDCASE
RETURN
* End-of-procedure : REGION

*=====
PROC MNU_01

```

Sample of Computer Program  
Main Menu Control Program

```
*=====
* PROCEDURE NAME : MNU_01
* DESCRIPTION    : DEFINE POPUP MENU TO SELECT PROVINCE IN SUMATERA

DEFINE POPUP MNU_01 FROM 8,17 TO 23,37
DEFINE BAR 2 OF MNU_01 PROMPT CENT_STR("Sumatera",19) SKIP
DEFINE BAR 3 OF MNU_01 PROMPT REPL(CHR(205),19) SKIP
DEFINE BAR 5 OF MNU_01 PROMPT "A. D.I.Aceh";
  MESSAGE "Print Reports in D.I.Aceh"
DEFINE BAR 6 OF MNU_01 PROMPT "B. Sumatera Utara";
  MESSAGE "Print Reports in Sumatera Utara"
DEFINE BAR 7 OF MNU_01 PROMPT "C. Sumatera Barat";
  MESSAGE "Print Reports in Sumatera Barat"
DEFINE BAR 8 OF MNU_01 PROMPT "D. Riau";
  MESSAGE "Print Reports in Riau"
DEFINE BAR 9 OF MNU_01 PROMPT "E. Jambi";
  MESSAGE "Print Reports in Jambi"
DEFINE BAR 10 OF MNU_01 PROMPT "F. Sumatera Selatan";
  MESSAGE "Print Reports in Sumatera Selatan"
DEFINE BAR 11 OF MNU_01 PROMPT "G. Bengkulu";
  MESSAGE "Print Reports in Bengkulu"
DEFINE BAR 12 OF MNU_01 PROMPT "H. Lampung";
  MESSAGE "Print Reports in Lampung"
DEFINE BAR 13 OF MNU_01 PROMPT "I. Return";
  MESSAGE "RETURN to main menu"
ON SELECTION POPUP MNU_01 DO REGION_1
RETURN
* End-of-procedure : MNU_01
*=====
PROC MNU_03
*=====
* PROCEDURE NAME : MNU_03
* DESCRIPTION    : DEFINE POPUP MENU TO SELECT PROVINCE IN JAWA
DEFINE POPUP MNU_03 FROM 8,17 TO 20,37
DEFINE BAR 2 OF MNU_03 PROMPT CENT_STR("Jawa",19) SKIP
DEFINE BAR 3 OF MNU_03 PROMPT REPL(CHR(205),19) SKIP
DEFINE BAR 5 OF MNU_03 PROMPT "A. D.K.I.Jakarta";
  MESSAGE "Print Reports in D.K.I.Jakarta"
DEFINE BAR 6 OF MNU_03 PROMPT "B. Jawa Barat";
  MESSAGE "Print Reports in Jawa Barat"
DEFINE BAR 7 OF MNU_03 PROMPT "C. Jawa Tengah";
  MESSAGE "Print Reports in Jawa Tengah"
DEFINE BAR 8 OF MNU_03 PROMPT "D. D.I.Yogyakarta";
  MESSAGE "Print Reports in D.I.yogyakarta"
DEFINE BAR 9 OF MNU_03 PROMPT "E. Jawa Timur";
  MESSAGE "Print Reports in Jawa Timur"
DEFINE BAR 10 OF MNU_03 PROMPT "F. Return";
  MESSAGE "Return to previous menu"
ON SELECTION POPUP MNU_03 DO REGION_3
RETURN
* End-of-procedure : MNU_03
*=====
PROC MNU_05
*=====
* PROCEDURE NAME : MNU_05
* DESCRIPTION    : DEFINE POPUP MENU TO SELECT PROVINCE IN BALI & NUSA TENGGARA
DEFINE POPUP MNU_05 FROM 8,17 TO 19,41
DEFINE BAR 2 OF MNU_05 PROMPT CENT_STR("Bali & Nusa Tenggara",23) SKIP
DEFINE BAR 3 OF MNU_05 PROMPT REPL(CHR(205),23) SKIP
DEFINE BAR 5 OF MNU_05 PROMPT "A. Bali";
  MESSAGE "Print Reports in Bali"
DEFINE BAR 6 OF MNU_05 PROMPT "B. Nusa Tenggara Barat";
  MESSAGE "Print Reports in Nusa Tenggara Barat"
DEFINE BAR 7 OF MNU_05 PROMPT "C. Nusa Tenggara Timur";
  MESSAGE "Print Reports in Nusa Tenggara Timur"
DEFINE BAR 8 OF MNU_05 PROMPT "D. Timor Timur";
  MESSAGE "Print Reports in Timor Timur"
DEFINE BAR 9 OF MNU_05 PROMPT "E. Return";
  MESSAGE "Return to previous menu"
ON SELECTION POPUP MNU_05 DO REGION_5
RETURN
* End-of-procedure : MNU_05
*=====
PROC MNU_06
*=====
* PROCEDURE NAME : MNU_06
* DESCRIPTION    : DEFINE POPUP MENU TO SELECT PROVINCE IN KALIMANTAN
DEFINE POPUP MNU_06 FROM 8,17 TO 19,40
DEFINE BAR 2 OF MNU_06 PROMPT CENT_STR("Kalimantan",22) SKIP
```



```

DEFINE BAR 3 OF MNU_06 PROMPT REPL(CHR(205),22) SKIP
DEFINE BAR 5 OF MNU_06 PROMPT "A. Kalimantan Barat";
  MESSAGE "Print Reports in Kalimantan Barat"
DEFINE BAR 6 OF MNU_06 PROMPT "B. Kalimantan Tengah";
  MESSAGE "Print Reports in Kalimantan Tengah"
DEFINE BAR 7 OF MNU_06 PROMPT "C. Kalimantan Selatan";
  MESSAGE "Print Reports in Kalimantan Selatan"
DEFINE BAR 8 OF MNU_06 PROMPT "D. Kalimantan Timur";
  MESSAGE "Print Reports in Kalimantan Timur"
DEFINE BAR 9 OF MNU_06 PROMPT "E. Return";
  MESSAGE "Return to previous menu"
ON SELECTION POPUP MNU_06 DO REGION_6
RETURN
* End-of-procedure : MNU_06
=====
PROC MNU_07
=====
* PROCEDURE NAME : MNU_07
* DESCRIPTION : DEFINE POPUP MENU TO SELECT PROVINCE IN SULAWESI
DEFINE POPUP MNU_07 FROM 8,17 TO 19,39
DEFINE BAR 2 OF MNU_07 PROMPT CENT_STR("Sulawesi",21) SKIP
DEFINE BAR 3 OF MNU_07 PROMPT REPL(CHR(205),21) SKIP
DEFINE BAR 5 OF MNU_07 PROMPT "A. Sulawesi Utara";
  MESSAGE "Print Reports in Sulawesi Utara"
DEFINE BAR 6 OF MNU_07 PROMPT "B. Sulawesi Tengah";
  MESSAGE "Print Reports in Sulawesi Tengah"
DEFINE BAR 7 OF MNU_07 PROMPT "C. Sulawesi Selatan";
  MESSAGE "Print Reports in Sulawesi Selatan"
DEFINE BAR 8 OF MNU_07 PROMPT "D. Sulawesi Tenggara";
  MESSAGE "Print Reports in Sulawesi Tenggara"
DEFINE BAR 9 OF MNU_07 PROMPT "E. Return";
  MESSAGE "Return to previous menu"
ON SELECTION POPUP MNU_07 DO REGION_7
RETURN
* End-of-procedure : MNU_07
=====
PROC MNU_08
=====
* PROCEDURE NAME : MNU_08
* DESCRIPTION : DEFINE POPUP MENU TO SELECT PROVINCE IN MALUKU & IRIAN JAYA
DEFINE POPUP MNU_08 FROM 8,17 TO 17,39
DEFINE BAR 2 OF MNU_08 PROMPT CENT_STR("Maluku & Irian Jaya",21) SKIP
DEFINE BAR 3 OF MNU_08 PROMPT REPL(CHR(205),21) SKIP
DEFINE BAR 5 OF MNU_08 PROMPT "A. Maluku";
  MESSAGE "Print Reports in Maluku"
DEFINE BAR 6 OF MNU_08 PROMPT "B. Irian Jaya";
  MESSAGE "Print Reports in Irian Jaya"
DEFINE BAR 7 OF MNU_08 PROMPT "C. Return";
  MESSAGE "Return to previous menu"
ON SELECTION POPUP MNU_08 DO REGION_8
RETURN
* End-of-procedure : MNU_08
=====
PROC REGION_1
=====
* PROCEDURE NAME : REGION_1
* DESCRIPTION : CONTROL POPUP MENU TO SELECT PROVINCE IN SUMATERA
DO CASE
  CASE BAR() = 5
    QP_NO='11'
    QP_NAME='D.I.Aceh'
  CASE BAR() = 6
    QP_NO='12'
    QP_NAME='Sumatera Utara'
  CASE BAR() = 7
    QP_NO='13'
    QP_NAME='Sumatera Barat'
  CASE BAR() = 8
    QP_NO='14'
    QP_NAME='Riau'
  CASE BAR() = 9
    QP_NO='15'
    QP_NAME='Jambi'
  CASE BAR() = 10
    QP_NO='16'
    QP_NAME='Sumatera Selatan'
  CASE BAR() = 11
    QP_NO='17'
    QP_NAME='Bengkulu'

```

Sample of Computer Program  
Main Menu Control Program

```
CASE BAR() = 12
  QP_NO='18'
  QP_NAME='Lampung'
CASE BAR() = 13
  DEACTIVATE POPUP
  RELEASE POPUP MNU_01
  RETURN
ENDCASE
DO &MODULE
ACTIVATE POPUP &MODULE
RETURN
* End-of-procedure : REGION_1
*****
PROC REGION_3
*****
* PROCEDURE NAME : REGION_3
* DESCRIPTION : CONTROL POPUP MENU TO SELECT PROVINCE IN JAWA
DO CASE
  CASE BAR() = 5
    QP_NO='31'
    QP_NAME='D.K.I.Jakarta'
  CASE BAR() = 6
    QP_NO='32'
    QP_NAME='Jawa Barat'
  CASE BAR() = 7
    QP_NO='33'
    QP_NAME='Jawa Tengah'
  CASE BAR() = 8
    QP_NO='34'
    QP_NAME='D.I.Yogyakarta'
  CASE BAR() = 9
    QP_NO='35'
    QP_NAME='Jawa Timur'
  CASE BAR() = 10
    DEACTIVATE POPUP
    RELEASE POPUP MNU_03
    RETURN
ENDCASE
DO &MODULE
ACTIVATE POPUP &MODULE
RETURN
* End-of-procedure : REGION_3
*****
PROC REGION_5
*****
* PROCEDURE NAME : REGION_5
* DESCRIPTION : CONTROL POPUP MENU TO SELECT PROVINCE IN BALI & NUSA TENGGARA
DO CASE
  CASE BAR() = 5
    QP_NO='51'
    QP_NAME='Bali'
  CASE BAR() = 6
    QP_NO='52'
    QP_NAME='Nusa Tenggara Barat'
  CASE BAR() = 7
    QP_NO='53'
    QP_NAME='Nusa Tenggara Timur'
  CASE BAR() = 8
    QP_NO='54'
    QP_NAME='Timor Timur'
  CASE BAR() = 9
    DEACTIVATE POPUP
    RELEASE POPUP NMU_05
    RETURN
ENDCASE
DO &MODULE
ACTIVATE POPUP &MODULE
RETURN
* End-of-procedure : REGION_5
*****
PROC REGION_6
*****
* PROCEDURE NAME : REGION_5
* DESCRIPTION : CONTROL POPUP MENU TO SELECT PROVINCE IN KALIMANTAN
DO CASE
  CASE BAR() = 5
    QP_NO='61'
    QP_NAME='Kalimantan Barat'
  CASE BAR() = 6
```

```

        QP_NO='62'
        QP_NAME='Kalimantan Tengah'
CASE BAR() = 7
        QP_NO='63'
        QP_NAME='Kalimantan Selatan'
CASE BAR() = 8
        QP_NO='64'
        QP_NAME='Kalimantan Timur'
CASE BAR() = 9
        DEACTIVATE POPUP
        RELEASE POPUP NMU_06
        RETURN
ENDCASE
DO &MODULE
ACTIVATE POPUP &MODULE
RETURN
* End-of-procedure : REGION_6
*====*
PROC REGION_7
*====*
* PROCEDURE NAME : REGION_7
* DESCRIPTION   : CONTROL POPUP MENU TO SELECT PROVINCE IN SULAWESI
DO CASE
CASE BAR() = 5
        QP_NO='71'
        QP_NAME='Sulawesi Utara'
CASE BAR() = 6
        QP_NO='72'
        QP_NAME='Sulawesi Tengah'
CASE BAR() = 7
        QP_NO='73'
        QP_NAME='Sulawesi Selatan'
CASE BAR() = 8
        QP_NO='74'
        QP_NAME='Sulawesi Tenggara'
CASE BAR() = 9
        DEACTIVATE POPUP
        RELEASE POPUP NMU_07
        RETURN
ENDCASE
DO &MODULE
ACTIVATE POPUP &MODULE
RETURN
* End-of-procedure : REGION_7
*====*
PROC REGION_8
*====*
* PROCEDURE NAME : REGION_8
* DESCRIPTION   : CONTROL POPUP MENU TO SELECT PROVINCE IN MALUKU & IRIAN JAYA
DO CASE
CASE BAR() = 5
        QP_NO='81'
        QP_NAME='Maluku'
CASE BAR() = 6
        QP_NO='82'
        QP_NAME='Irian Jaya'
CASE BAR() = 7
        DEACTIVATE POPUP
        RELEASE POPUP NMU_08
        RETURN
ENDCASE
DO &MODULE
ACTIVATE POPUP &MODULE
RETURN
* End-of-procedure : REGION_8
*====*
PROC MNU_S
*====*
* PROCEDURE NAME : MNU_S
* DESCRIPTION   : DEFINE POPUP MENU TO SELECT PRINT FORMAT IN SURFACE IRRIGATION SCHEME
DEFINE POPUP MNU_S FROM 4,40 TO 22,77
DEFINE BAR 2 OF MNU_S PROMPT CENT_STR("Item to Print",36) SKIP
DEFINE BAR 3 OF MNU_S PROMPT REPL(CHR(205),36) SKIP
DEFINE BAR 5 OF MNU_S PROMPT "A. Scheme History (Summary)";
        MESSAGE "Print Reports of Scheme History (Summary)"
DEFINE BAR 6 OF MNU_S PROMPT "B. Scheme History (Current O/M)";
        MESSAGE "Print Reports of Scheme History (Current O/M)"
DEFINE BAR 7 OF MNU_S PROMPT "C. Scheme History (On-Going)";
        MESSAGE "Print Reports of Scheme History (On-Going)"

```

Sample of Computer Program  
Main Menu Control Program

```

DEFINE BAR 8 OF MNU_S PROMPT "D. Scheme History (Proposed)";
MESSAGE "Print Reports of Scheme History (Proposed)";
DEFINE BAR 9 OF MNU_S PROMPT "E. Present Condition of Area (No.1)";
MESSAGE "Print Reports of Present Condition of Area (No.1)";
DEFINE BAR 10 OF MNU_S PROMPT "F. Present Condition of Area (No.2)";
MESSAGE "Print Reports of Present Condition of Area (No.2)";
DEFINE BAR 11 OF MNU_S PROMPT "G. Area Condition after Works (No.1)";
MESSAGE "Print Reports of Area Condition after Works (No.1)";
DEFINE BAR 12 OF MNU_S PROMPT "H. Area Condition after Works (No.2)";
MESSAGE "Print Reports of Area Condition after Works (No.2)";
DEFINE BAR 13 OF MNU_S PROMPT "I. Length of Canals";
MESSAGE "Print Reports of Length of Canals";
DEFINE BAR 14 OF MNU_S PROMPT "J. Cost (No.1)";
MESSAGE "Print Reports of Cost (No.1)";
DEFINE BAR 15 OF MNU_S PROMPT "K. Cost (No.2)";
MESSAGE "Print Reports of Cost (No.2)";
DEFINE BAR 16 OF MNU_S PROMPT "L. Head Works & Environment";
MESSAGE "Print Reports of Head Works & Environment";
DEFINE BAR 17 OF MNU_S PROMPT "M. Return";
MESSAGE "RETURN to main menu";
ON SELECTION POPUP MNU_S DO ACTION_S
RETURN
* End-of-procedure : MNU_S
=====
PROC ACTION_S
*
* PROCEDURE NAME : ACTION_S
* DESCRIPTION : CONTROL POPUP MENU TO SELECT PRINT FORMAT IN SURFACE IRRIGATION SCHEME
DO CASE
CASE BAR() = 5
QMENU='01'
CASE BAR() = 6
QMENU='02'
CASE BAR() = 7
QMENU='03'
CASE BAR() = 8
QMENU='04'
CASE BAR() = 9
QMENU='05'
CASE BAR() = 10
QMENU='06'
CASE BAR() = 11
QMENU='07'
CASE BAR() = 12
QMENU='08'
CASE BAR() = 13
QMENU='09'
CASE BAR() = 14
QMENU='10'
CASE BAR() = 15
QMENU='11'
CASE BAR() = 16
QMENU='12'
CASE BAR() = 17
DEACTIVATE POPUP
RELEASE POPUP MNU_S
RETURN
ENDCASE
DO PRT_S
RETURN
* End-of-procedure : ACTION_S
=====
PROC MNU_R
*
* PROCEDURE NAME : MNU_R
* DESCRIPTION : DEFINE POPUP MENU TO SELECT PRINT FORMAT IN SWAMP IRRIGATION SCHEME
DEFINE POPUP MNU_R FROM 4,40 TO 17,73
DEFINE BAR 2 OF MNU_R PROMPT CENT_STR("Item to Print",32) SKIP
DEFINE BAR 3 OF MNU_R PROMPT REPL(CHR(205),32) SKIP
DEFINE BAR 5 OF MNU_R PROMPT "A. Scheme History (Summary)";
MESSAGE "Print Reports of Scheme History (Summary)";
DEFINE BAR 6 OF MNU_R PROMPT "B. Scheme History (Current O/M)";
MESSAGE "Print Reports of Scheme History (Current O/M Scheme)";
DEFINE BAR 7 OF MNU_R PROMPT "C. Scheme History (Program)";
MESSAGE "Print Reports of Scheme History (Programed Scheme)";
DEFINE BAR 8 OF MNU_R PROMPT "D. Scheme Area";
MESSAGE "Print Reports of Scheme Area";
DEFINE BAR 9 OF MNU_R PROMPT "E. Length of Canals";
MESSAGE "Print Reports of Canal Length";

```

```

DEFINE BAR 10 OF MNU_R PROMPT "F. Cost";
MESSAGE "Print Reports of Cost";
DEFINE BAR 11 OF MNU_R PROMPT "G. Environment";
MESSAGE "Print Reports of Environment";
DEFINE BAR 12 OF MNU_R PROMPT "H. Return";
MESSAGE "RETURN to main menu"
ON SELECTION POPUP MNU_R DO ACTION_R
RETURN
* End-of-procedure : MNU_R
=====
PROC ACTION_R
=====
* PROCEDURE NAME : ACTION_R
* DESCRIPTION : CONTROL POPUP MENU TO SELECT PRINT FORMAT IN SWAMP IRRIGATION SCHEME
DO CASE
CASE BAR() = 5
QMENU='01'
CASE BAR() = 6
QMENU='02'
CASE BAR() = 7
QMENU='03'
CASE BAR() = 8
QMENU='04'
CASE BAR() = 9
QMENU='05'
CASE BAR() = 10
QMENU='06'
CASE BAR() = 11
QMENU='07'
CASE BAR() = 12
DEACTIVATE POPUP
RELEASE POPUP MNU_R
RETURN
ENDCASE
DO PRT_R
RETURN
* End-of-procedure : ACTION_R
=====
PROC MNU_G
=====
* PROCEDURE NAME : MNU_G
* DESCRIPTION : DEFINE POPUP MENU TO SELECT PRINT FORMAT IN GROUNDWATER IRRIGATION SCHEME
DEFINE POPUP MNU_G FROM 4,40 TO 12,73
DEFINE BAR 2 OF MNU_G PROMPT CENT_STR("Item to Print",32) SKIP
DEFINE BAR 3 OF MNU_G PROMPT REPL(CHR(205),32) SKIP
DEFINE BAR 5 OF MNU_G PROMPT "A. Scheme History";
MESSAGE "Print Reports of Scheme History (Summary)"
DEFINE BAR 6 OF MNU_G PROMPT "B. Others";
MESSAGE "Print Reports of Area, Canal Length, and Cost"
DEFINE BAR 7 OF MNU_G PROMPT "C. Return";
MESSAGE "RETURN to main menu"
ON SELECTION POPUP MNU_G DO ACTION_G
RETURN
* End-of-procedure : MNU_G
=====
PROC ACTION_G
=====
* PROCEDURE NAME : ACTION_G
* DESCRIPTION : CONTROL POPUP MENU TO SELECT PRINT FORMAT IN GROUNDWATER IRRIGATION SCHEME
DO CASE
CASE BAR() = 5
QMENU='01'
CASE BAR() = 6
QMENU='02'
CASE BAR() = 7
DEACTIVATE POPUP
RELEASE WINDOW MNU_G
RETURN
ENDCASE
DO PRT_S
RETURN
* End-of-procedure : ACTION_R
=====
PROC printset
=====
* PROCEDURE NAME : PRINTSET
* DESCRIPTION : PROMPT USER TO BE SURE PRINTER IS IN ON-LINE WHEN IT IS IN OFF-LINE
PARAMETER ok

```

Sample of Computer Program  
Main Menu Control Program

```

gn_pkey = 0
DEFINE WINDOW printemp FROM 08,25 to 17,56
IF .NOT. LASTKEY() = 27
  ON ERROR DO prnrtry WITH ok
  IF gn_pkey <> 27
    SET DEVICE TO PRINT
  ENDIF
  ON ERROR
ENDIF
RELEASE WINDOW printemp
RETURN
* End-of-procedure : PRINTSET
*====
PROC prnrtry
*====
* PROCEDURE NAME : PRNRTRY
* DESCRIPTION   : PROMPT USER TO BE SURE PRINTER IS IN ON-LINE WHEN IT IS IN OFF-LINE
PARAMETER ok
PRIVATE lc_escape
lc_escape = SET("ESCAPE")
IF .NOT. PRINTSTATUS()
  IF lc_escape = 'ON'
    SET ESCAPE OFF
  ENDIF
  gn_pkey = 0
  ACTIVATE WINDOW printemp
  @ 1, 0 SAY 'Please ready your printer or'
  @ 2, 0 SAY '   press ESC to cancel'
  DO WHILE ( .NOT. PRINTSTATUS() ) .AND. gn_pkey <> 27
    gn_pkey = INKEY()
  ENDDO
  DEACTIVATE WINDOW printemp
  SET ESCAPE &lc_escape
  IF gn_pkey <> 27
    RETRY
  ELSE
    ok = .F.
  ENDIF
ENDIF
RETURN
* End-of-procedure : PRNRTRY
*====
PROC errpause
*====
* PROCEDURE NAME : ERRPAUSE
* DESCRIPTION   : DISPLAY MESSAGE WHEN ERROR OCCURS
PARAMETER errmsg1,errmsg2
ACTIVATE WINDOW Pause
? CHR(7)
@ 00, 25 SAY '<<<<<< ERROR MESSAGE >>>>>>'
@ 01, 01 SAY errmsg1
@ 02, 01 SAY errmsg2
WAIT ' Press any key to continue'
DEACTIVATE WINDOW Pause
RETURN
* End-of-procedure : ERRPAUSE
*====
PROC prtstp
*====
* PROCEDURE NAME : PRSTP
* DESCRIPTION   : CANCEL PRINTING
@ prow()+1, 0 say chr(18)
EJECT
SET DEVICE TO SCREEN
ACTIVATE WINDOW Pause
? CHR(7)
@ 01, 25 SAY '<<<<<< PRINT CANCEL >>>>>>'
@ 03, 25 SAY ' All process is cancelled'
WAIT ' Press any key to continue'

DEACTIVATE WINDOW Pause
CLOSE DATABASES
DEACTIVATE WINDOW COVER
*DEACTIVATE POPUP
*RELEASE ALL
*CLOSE ALL
*CLEAR
RETURN TO MASTER

```

```

* End-of-procedure : PRTSTP
*=====
PROC prtmsg
*=====
* PROCEDURE NAME : PRTMSG
* DESCRIPTION   : DISPLAY MESSAGE WHILE PRINTING
PARAMETER OK
IF OK
  ACTIVATE WINDOW Pause
  @ 01, 25 SAY '<<<<<< PRINTING >>>>>>'
  @ 02, 00 SAY 'Press <Esc> to cancel print'
ELSE
  DEACTIVATE WINDOW Pause
ENDIF
RETURN
* End-of-procedure : PRTMSG

* End-of-file : MENU_R.PRG

*****
* PROCEDURE NAME : MENU3.PRG
* DESCRIPTION   : MAIN MENU OF SYSTEM MAINTENANCE
* PROCEDURE     : MEN_CREA,M_CASES
* PREPARED BY   : Takuya IGAWA, JICA FIDP Team
* PREPARED ON   : August 4, 1993
*****

IF SET("TALK") = "ON"
  SET TALK OFF
  lc_talk = "ON"
ELSE
  lc_talk = "OFF"
ENDIF

lc_cursor = SET("CURSOR")
SET CURSOR ON

lc_status = SET("STATUS")
IF lc_status = "ON"
  SET STATUS OFF
ENDIF

SET SCOREBOARD OFF
set safety off
set bell on
set confirm on

DEFINE WINDOW COVER FROM 0,0 TO 24,79 NONE
DEFINE WINDOW PAUSE FROM 15,00 TO 21,79 DOUBLE

STORE .T. TO LOOPA,LOOPB
*IF ISCOLOR()
* SET COLOR TO GR+/B,N/BG
* SET COLOR OF BOX TO GR+/B
*ENDIF
*IF ISCOLOR()
* COL1='SET COLOR TO W/R'
* COL2='SET COLOR TO R/W'
* COL0='SET COLOR TO W/B'
*ELSE
  COL0='SET COLOR TO'
  COL1='SET COLOR TO N/W'
  COL2='SET COLOR TO N/W'
*ENDIF
CLEAR
@ 1, 20 SAY 'JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)'
@ 3, 20 SAY 'Formulation of Irrigation Development Program'
&COL1
@ 23,15 SAY 'To Select Item, Use '+CHR(24)+' '+CHR(25)+' Key and Press <ENTER> Key'
&COL0
DO MEN_CREA
ACTIVATE POPUP MAIN
IF lc_status = "OFF"
  SET STATUS OFF
ENDIF
SET CURSOR &lc_cursor
SET TALK &lc_talk
CLEAR ALL
CLEAR

```

Sample of Computer Program  
Main Menu Control Program

RETURN

```
*****  
FUNCTION CENT_STR  
*****
```

```
PARAMETERS STRING,STLEN  
PRIVATE RET_VAL,LPAD,TPAD  
LPAD = INT((STLEN-LEN(LTRIM(TRIM(STRING))))/2)  
TPAD = STLEN - LPAD - LEN(LTRIM(TRIM(STRING)))  
RET_VAL = SPACE(LPAD) + LTRIM(TRIM(STRING)) + SPACE(TPAD)  
RETURN RET_VAL
```

```
*****  
PROC MEN_CREA  
*****
```

```
* PROCEDURE NAME : MEN_CREA  
* DESCRIPTION : DEFINE POPUP MENU TO SELECT MENU IN SYSTEM MAINTENANCE SUB-SYSTEM  
DEFINE POPUP MAIN FROM 6,20 TO 20,60  
DEFINE BAR 2 OF MAIN PROMPT CENT_STR("System Maintenance",39) SKIP  
DEFINE BAR 3 OF MAIN PROMPT REPL(CHR(205),39) SKIP  
DEFINE BAR 5 OF MAIN PROMPT CENT_STR("Data Backup",39);  
MESSAGE "Backup database file to floppy disk"  
DEFINE BAR 7 OF MAIN PROMPT CENT_STR("Data Restore",39);  
MESSAGE "Restore data from floppy disk"  
DEFINE BAR 9 OF MAIN PROMPT CENT_STR("File Cleaning",39);  
MESSAGE "Cleaning database file"  
DEFINE BAR 11 OF MAIN PROMPT CENT_STR("Show information",39);  
MESSAGE "Show information of database file"  
DEFINE BAR 13 OF MAIN PROMPT CENT_STR("Quit",39);  
MESSAGE "Terminate this program and go back to the DOT prompt"  
ON SELECTION POPUP MAIN DO M_CASES
```

```
*  
RETURN  
* End-of-procedure : MEN_CREA  
*****
```

```
PROC M_CASES  
*****
```

```
* PROCEDURE NAME : M_CASES  
* DESCRIPTION : CONTROL POPUP MENU TO SELECT MENU IN SYSTEM MAINTENANCE SUB-SYSTEM  
DO CASE  
CASE BAR() = 5  
do menu31  
CASE BAR() = 7  
do menu32  
CASE BAR() = 9  
do menu33  
CASE BAR() = 11  
do menu34  
CASE BAR() = 13  
DEACTIVATE POPUP
```

```
ENDCASE  
RETURN  
* End-of-procedure : M_CASES
```

```
* EOF OF MENU3.PRG
```



Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

*****
* PROCEDURE NAME : GREG.PRG *
* DESCRIPTION : Entry of record for groundwater irrigation scheme *
* PROCEDURE : MASTER1,LEGEND,DIRECT *
* PREPARED BY : Takuya IGAWA, JICA FIDP Team *
* PREPARED ON : August 8, 1993 *
*****
ACTIVATE WINDOW COVER
USE GW ORDER ID_NO
DO WHILE .T.
  CLEAR
  &COL1
  @ 1,10 SAY 'JAPAN INTERNATIONAL COOPERATION AGENCY'
  @ 3,10 SAY 'Formulation of Irrigation Development Program (FIDP)'
  @ 5,10 SAY 'Inventory Survey'
  @ 7,10 SAY 'Groundwater Irrigation Scheme'
  @ 9,10 SAY '(Data Entry)'
  &COL0
  STORE SPACE(30) TO Q_NAME
  STORE SPACE(11) TO Q_ID_NO
  @ 15, 10 SAY ' ID Number: ' GET Q_ID_NO
  @ 22, 10 say 'Enter ID Number'
  @ 23, 10 SAY 'Press <Enter> to quit menu'
  READ
  IF Q_ID_NO = SPACE(9)
  * DO RENUMBER
  CLOSE DATABASES
  *
  USE INFO
  GOTO 4
  REPL DATE2 WITH DATE()
  USE
  *
  DEACTIVATE WINDOW COVER
  RETURN
ENDIF
SEEK Q_ID_NO
IF .NOT. EOF()
  ? CHR(7)
  @ 22, 10 CLEAR
  &COL1
  @ 22, 10 SAY 'Data of '+ TRIM(Q_ID_NO) + ' already exists in master file !'
  @ 23, 10 say 'Please check I.D.Number again'
  &COL0
  WAIT
  LOOP
ENDIF
@ 17, 10 clear
@ 17, 10 SAY ' Name of Scheme:' GET Q_NAME
@ 22, 10 say 'Enter Scheme name'
READ
CLEAR GETS
DO MASTER1
ENDDO

*=====
PROC MASTER1
*=====
* PROCEDURE NAME : MASTER1
* DESCRIPTION : MAIN BODY OF DATA ENTRY FOR GROUNDWATER IRRIGATION SCHEME
CLEAR
@ 0, 0 SAY ' ID NO.: ' NAME OF SCHEME:
&COL1
@ 0, 10 SAY Q_ID_NO
@ 0, 45 SAY Q_NAME
&COL0

STORE .T. TO LOOP2
STORE .T. TO INP0
STORE .F. TO INP1,INP2,INP3,INP4,INP5,INP6

DO WHILE LOOP2
*-----
DO WHILE INP0
  QQ11a =Q11a
  QQ11b =Q11b
  QQ12a =Q12a
  QQ12b =Q12b
  QQ131a=Q131a

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

QQ131b=Q131b
QQ132a=Q132a
QQ132b=Q132b
QQ133a=Q133a
QQ133b=Q133b
QQ134a=Q134a
QQ134b=Q134b
QQ135a=Q135a
QQ135b=Q135b
QQ136a=Q136a
QQ136b=Q136b
QQ137a=Q137a
QQ137b=Q137b
QQ138a=Q138a
QQ138b=Q138b
QQ21a =Q21a
QQ21b =Q21b
QQ221a1=Q221a1
QQ221a2=Q221a2
QQ221b1=Q221b1
QQ221b2=Q221b2
QQ221c1=Q221c1
QQ221c2=Q221c2
QQ221d1=Q221d1
QQ221d2=Q221d2
QQ222 =Q222
QQ231a1=Q231a1
QQ231b1=Q231b1
QQ231b2=Q231b2
QQ231c1=Q231c1
QQ231c2=Q231c2
QQ231d1=Q231d1
QQ231d2=Q231d2
QQ231e1=Q231e1
QQ231e2=Q231e2
QQ232 =Q232
QQ31a=Q31a
QQ31b=Q31b
QQ32a=Q32a
QQ32b=Q32b
QQ33a=Q33a
QQ33b=Q33b
QQ34a=Q34a
QQ34b=Q34b
QQ35a=Q35a
QQ35b=Q35b
QQ41a=Q41a
QQ41b=Q41b
QQ42a=Q42a
QQ42b=Q42b
QQ511=Q511
QQ512=Q512
QQ52 =Q52
QQ53 =Q53
STORE .F. TO INP0
STORE .T. TO INP1
ENDDO

DO WHILE INP1
  *-- Format Page: 1
  @ 1, 0 CLEAR TO 19, 79
  @ 1, 0 SAY "1. LOCATION"
  @ 3, 0 SAY "1.1 Province:"
  @ 4, 0 SAY " Code "
  @ 4,25 SAY " Name "
  @ 6, 0 SAY "1.2 Kabupaten:"
  @ 7, 0 SAY " Code "
  @ 7,27 SAY " Name "
  @ 9, 0 SAY "1.3 Kecamatan:"
  @ 10, 0 SAY " 1. "
  @ 10,16 SAY "Code"
  @ 10,20 SAY " "
  @ 10,29 SAY " Name "
  @ 11, 0 SAY " 2. Code "
  @ 11,29 SAY " Name "
  @ 12, 0 SAY " 3. Code "
  @ 12,29 SAY " Name "
  @ 13, 0 SAY " 4. Code "
  @ 13,29 SAY " Name "

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

@ 14, 0 SAY "      5.      Code  "
@ 14,29 SAY " Name "
@ 15, 0 SAY "      6.      Code  "
@ 15,29 SAY " Name "
@ 16, 0 SAY "      7.      Code  "
@ 16,29 SAY " Name "
@ 17, 0 SAY "      8.      Code  "
@ 17,29 SAY " Name "
DO LEGEND
*STORE SPACE(2) TO QQ11A
*STORE SPACE(4) TO QQ12A
*STORE SPACE(6) TO QQ131A,QQ132A,QQ133A,QQ134A,QQ135A,QQ136A,QQ137A,QQ138A
*STORE SPACE(20) TO QQ11B,QQ12B,QQ131B,QQ132B,QQ133B,QQ134B,QQ135B,QQ136B,QQ137B,QQ138B

```

```

@ 4,23 GET QQ11a PICT "XX"
@ 4,37 GET QQ11b PICT "XXXXXXXXXXXXXXXXXXXX"
@ 7,23 GET QQ12a PICT "XXXX"
@ 7,37 GET QQ12b PICT "XXXXXXXXXXXXXXXXXXXX"
@ 10,23 GET QQ131a PICT "XXXXXX"
@ 10,37 GET QQ131b PICT "XXXXXXXXXXXXXXXXXXXX"
@ 11,23 GET QQ132a PICT "XXXXXX"
@ 11,37 GET QQ132b PICT "XXXXXXXXXXXXXXXXXXXX"
@ 12,23 GET QQ133a PICT "XXXXXX"
@ 12,37 GET QQ133b PICT "XXXXXXXXXXXXXXXXXXXX"
@ 13,23 GET QQ134a PICT "XXXXXX"
@ 13,37 GET QQ134b PICT "XXXXXXXXXXXXXXXXXXXX"
@ 14,23 GET QQ135a PICT "XXXXXX"
@ 14,37 GET QQ135b PICT "XXXXXXXXXXXXXXXXXXXX"
@ 15,23 GET QQ136a PICT "XXXXXX"
@ 15,37 GET QQ136b PICT "XXXXXXXXXXXXXXXXXXXX"
@ 16,23 GET QQ137a PICT "XXXXXX"
@ 16,37 GET QQ137b PICT "XXXXXXXXXXXXXXXXXXXX"
@ 17,23 GET QQ138a PICT "XXXXXX"
@ 17,37 GET QQ138b PICT "XXXXXXXXXXXXXXXXXXXX"
READ

```

```

OK = .T.
DO DIRECT WITH OK,SPACE(1),'INP2'
IF .NOT. OK
  LOOP
ENDIF

```

```

STORE .F. TO INP1
EXIT
ENDDO

```

```

DO WHILE INP2
  *-- Format Page: 2
  @ 1, 0 CLEAR
  @ 1, 0 SAY "2.STATUS OF SCHEME"
  @ 3, 0 SAY "2.1      Select Present Status of Sub-project (not limited to one answer):"
  @ 4, 0 SAY "      ( ) On-going/Construction or Extension"
  @ 5, 0 SAY "      ( ) Proposed/Construction or Extension"
  @ 7, 0 SAY "2.2      On-going/Construction or Extension:"
  @ 9, 0 SAY "2.2.1      History"
  @ 10, 0 SAY "      ( ) F/S for construction was conducted in 19"
  @ 11, 0 SAY "      ( ) D/D for construction was conducted in 19"
  @ 12, 0 SAY "      ( ) Construction was commenced in 19"
  @ 13, 0 SAY "      ( ) Construction was suspended in 19"
  @ 15, 0 SAY "2.2.2      Lending Agency: "
DO LEGEND

```

```

*store space(1) to qq21a,qq21b,qq221a1,qq221b1,qq221c1,qq221d1
*store space(2) to qq221a2,qq221b2,qq221c2,qq221d2
*store space(10) to qq222

```

```

@ 4, 9 GET QQ21a PICT "X"
@ 5, 9 GET QQ21b PICT "X"
@ 10, 9 GET QQ221a1 PICT "X"
@ 10,53 GET QQ221a2 PICT "XX"
@ 11, 9 GET QQ221b1 PICT "X"
@ 11,53 GET QQ221b2 PICT "XX"
@ 12, 9 GET QQ221c1 PICT "X"
@ 12,45 GET QQ221c2 PICT "XX"
@ 13, 9 GET QQ221d1 PICT "X"
@ 13,45 GET QQ221d2 PICT "XX"
@ 15,24 GET QQ222 PICT "XXXXXXXXXX"

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

READ

OK = .T.
DO DIRECT WITH OK, 'INP1', 'INP3'
IF .NOT. OK
  LOOP
ENDIF

STORE .F. TO INP2
EXIT
ENDDO

DO WHILE INP3
  *-- Format Page: 3
  @ 1, 0 CLEAR
  @ 1, 0 SAY "2.STATUS OF SCHEME"
  @ 3, 0 SAY "2.3 Proposed/Construction or Extension:"
  @ 5, 0 SAY "2.3.1 History"
  @ 6, 0 SAY " ( ) No investigation was made so far."
  @ 7, 0 SAY " ( ) F/S for construction was conducted in 19"
  @ 8, 0 SAY " ( ) D/D for construction was conducted in 19"
  @ 9, 0 SAY " ( ) Construction will be commenced in 19"
  @ 10, 0 SAY " ( ) Construction will be completed in 19"
  @ 12, 0 SAY "2.3.2 Lending Agency: "
  DO LEGEND

  *STORE SPACE(1) TO QQ231A1,QQ231B1,QQ231C1,QQ231D1,QQ231E1
  *STORE SPACE(2) TO QQ231B2,QQ231C2,QQ231D2,QQ231E2
  *STORE SPACE(10) TO QQ232

  @ 6, 9 GET QQ231a1 PICT "X"
  @ 7, 9 GET QQ231b1 PICT "X"
  @ 7,53 GET QQ231b2 PICT "XX"
  @ 8, 9 GET QQ231c1 PICT "X"
  @ 8,53 GET QQ231c2 PICT "XX"
  @ 9, 9 GET QQ231d1 PICT "X"
  @ 9,49 GET QQ231d2 PICT "XX"
  @ 10, 9 GET QQ231e1 PICT "X"
  @ 10,49 GET QQ231e2 PICT "XX"
  @ 12,24 GET QQ232 PICT "XXXXXXXXXX"
  READ
  OK = .T.
  DO DIRECT WITH OK, 'INP2', 'INP4'
  IF .NOT. OK
    LOOP
  ENDIF
  STORE .F. TO INP3
  EXIT
ENDDO

DO WHILE INP4
  *-- Format Page: 4
  @ 1, 0 CLEAR
  @ 1, 0 SAY "3. AREA"
  @ 2, 0 SAY " Unit: ha"
  @ 3, 0 SAY "-----"
  @ 4, 0 SAY " Description Present Plan"
  @ 5, 0 SAY "-----"
  @ 6, 0 SAY "3.1 Irrigated Paddy Field "
  @ 6,46 SAY " "
  @ 8, 0 SAY "3.2 Rainfed Paddy Field "
  @ 8,46 SAY " "
  @ 10, 0 SAY "3.3 Upland Field "
  @ 10,46 SAY " "
  @ 12, 0 SAY "3.4 Others "
  @ 12,46 SAY " "
  @ 14, 0 SAY "3.5 Total "
  @ 14,46 SAY " "
  @ 15, 0 SAY "-----"
  DO LEGEND

  *STORE 0 TO QQ31A,QQ31B,QQ32A,QQ32B,QQ33A,QQ33B,QQ34A,QQ34B,QQ35A,QQ35B

  @ 6,39 GET QQ31a PICT "999,999"
  @ 6,54 GET QQ31b PICT "999,999"
  @ 8,39 GET QQ32a PICT "999,999"
  @ 8,54 GET QQ32b PICT "999,999"

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```
@ 10,39 GET QQ33a PICT "999,999"
@ 10,54 GET QQ33b PICT "999,999"
@ 12,39 GET QQ34a PICT "999,999"
@ 12,54 GET QQ34b PICT "999,999"
@ 14,39 GET QQ35a PICT "999,999"
@ 14,54 GET QQ35b PICT "999,999"
READ
```

```
OK = .T.
DO DIRECT WITH OK, 'INP3', 'INPS'
IF .NOT. OK
  LOOP
ENDIF
STORE .F. TO INP4
EXIT
ENDDO
```

DO WHILE INP5

```
*-- Format Page: 5
@ 1, 0 CLEAR
@ 1, 0 SAY "4.      WELL CHARACTERISTICS"
@ 3, 0 SAY "-----"
@ 4, 0 SAY "      Description              Number      Average Depth"
@ 5, 0 SAY "-----"
@ 7, 0 SAY "4.1    Shallow (ITW)          "
@ 7,46 SAY " nos          "
@ 7,63 SAY " m"
@ 9, 0 SAY "4.2    Deep (DTW)           "
@ 9,46 SAY " nos          "
@ 9,63 SAY " m"
@ 10, 0 SAY "-----"
```

\*STORE 0 TO QQ41A,QQ41B,QQ42A,QQ42B

```
@ 7,39 GET QQ41a PICT "999,999"
@ 7,57 GET QQ41b PICT "999,999"
@ 9,39 GET QQ42a PICT "999,999"
@ 9,57 GET QQ42b PICT "999,999"
READ
```

```
OK = .T.
DO DIRECT WITH OK, 'INP4', 'INP6'
IF .NOT. OK
  LOOP
ENDIF
STORE .F. TO INP5
EXIT
ENDDO
```

DO WHILE INP6

```
*-- Format Page: 6
@ 1, 0 CLEAR
@ 1, 0 SAY "5.      CONSTRUCTION COST"
@ 2, 0 SAY "      Unit: Million Rp."
@ 3, 0 SAY "-----"
@ 4, 0 SAY "      Description              Construction "
@ 5, 0 SAY "      Cost                      "
@ 6, 0 SAY "-----"
@ 7, 0 SAY "5.1    Well"
@ 9, 0 SAY "5.1.1  Shallow Well          "
@ 11, 0 SAY "5.1.2  Deep Well           "
@ 13, 0 SAY "5.2    Canals              "
@ 15, 0 SAY "5.3    Total                "
@ 16, 0 SAY "-----"
```

\*STORE 0 TO QQ511,QQ512,QQ52,QQ53

```
@ 9,39 GET QQ511 PICT "999,999.99"
@ 11,39 GET QQ512 PICT "999,999.99"
@ 13,39 GET QQ52 PICT "999,999.99"
@ 15,39 GET QQ53 PICT "999,999.99"
READ
```

```
OK = .T.
DO DIRECT WITH OK, 'INP5', SPACE(1)
IF .NOT. OK
  LOOP
```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

ENDIF
STORE .F. TO INP6
EXIT
ENDDO
*-----
ENDDO
IF READKEY()=270
  APPE BLANK
  REPL ID_NO WITH Q_ID_NO,NAME WITH Q_NAME
  REPL R_NO WITH SUBSTR(ID_NO,1,1),P_NO WITH SUBSTR(ID_NO,1,2)
  REPL Q11a WITH QQ11a,Q11b WITH QQ11b,Q12a WITH QQ12a,Q12b WITH QQ12b
  REPL Q131a WITH QQ131a,Q131b WITH QQ131b,Q132a WITH QQ132a,Q132b WITH QQ132b
  REPL Q133a WITH QQ133a,Q133b WITH QQ133b,Q134a WITH QQ134a,Q134b WITH QQ134b
  REPL Q135a WITH QQ135a,Q135b WITH QQ135b,Q136a WITH QQ136a,Q136b WITH QQ136b
  REPL Q137a WITH QQ137a,Q137b WITH QQ137b,Q138a WITH QQ138a,Q138b WITH QQ138b
  REPL Q21a WITH QQ21a,Q21b WITH QQ21b,Q221a1 WITH QQ221a1,Q221a2 WITH QQ221a2
  REPL Q221b1 WITH QQ221b1,Q221b2 WITH QQ221b2,Q221c1 WITH QQ221c1,Q221c2 WITH QQ221c2
  REPL Q221d1 WITH QQ221d1,Q221d2 WITH QQ221d2,Q222 WITH QQ222
  REPL Q231a1 WITH QQ231a1,Q231b1 WITH QQ231b1,Q231b2 WITH QQ231b2,Q231c1 WITH QQ231c1
  REPL Q231c2 WITH QQ231c2,Q231d1 WITH QQ231d1,Q231d2 WITH QQ231d2,Q231e1 WITH QQ231e1
  REPL Q231e2 WITH QQ231e2,Q232 WITH QQ232
  REPL Q31a WITH QQ31a,Q31b WITH QQ31b,Q32a WITH QQ32a,Q32b WITH QQ32b
  REPL Q33a WITH QQ33a,Q33b WITH QQ33b,Q34a WITH QQ34a,Q34b WITH QQ34b
  REPL Q35a WITH QQ35a,Q35b WITH QQ35b
  REPL Q41a WITH QQ41a,Q41b WITH QQ41b,Q42a WITH QQ42a,Q42b WITH QQ42b
  REPL Q511 WITH QQ511,Q512 WITH QQ512,Q52 WITH QQ52,Q53 WITH QQ53
ENDIF
RETURN
* End-of-procedure : MASTER1
*-----
PROC LEGEND
*-----
* PROCEDURE NAME : LEGEND
* DESCRIPTION : DISPLAY MENU FOR CURSOR MOVE

&COL2
@ 20, 10 TO 23,70 DOUBLE
@ 21, 11 say ' PgUp : Previous Page PgDn : Next Page '
@ 22, 11 say ' Ctrl-End : Quit with Save Esc : Quit without Save '
IF INP1
  @ 21, 11 SAY SPACE(30)
ENDIF
IF INP6
  @ 21, 40 SAY SPACE(25)
ENDIF
&COL0
RETURN
* End-of-procedure : LEGEND
*-----
PROC DIRECT
*-----
* PROCEDURE NAME : DIRECT
* DESCRIPTION : DIRECT COMPUTER TO MOVE PREVIOUS/NEXT PAGE

PARAMETER OK,KEY1,KEY2
DO CASE
CASE READKEY()=0 .OR. READKEY()=256 .OR. READKEY()=4 .OR. READKEY()=260 ;
  .OR. READKEY()=6 .OR. READKEY()=262
  IF KEY1=SPACE(1)
    OK = .F.
  ELSE
    STORE .T. TO &KEY1
  ENDIF
CASE READKEY()=1 .OR. READKEY()=257 .OR. READKEY()=5 .OR. READKEY()=261 ;
  .OR. READKEY()=7 .OR. READKEY()=263 .OR. READKEY()=15 .OR. READKEY()=271
  IF KEY2=SPACE(1)
    OK = .F.
  ELSE
    STORE .T. TO &KEY2
  ENDIF
CASE READKEY()=12 .OR. READKEY()=269 .OR. READKEY()=270
  STORE .F. TO LOOP2
OTHERWISE
  OK = .F.
ENDCASE
RETURN
* End-of-procedure : DIRECT

```

```

* End-of-file : GREG.PRG

*****
* PROCEDURE NAME : GCOR.PRG *
* DESCRIPTION : Correction of record for groundwater irrigation scheme*
* PROCEDURE : MASTER1,LEGEND,DIRECT *
* PREPARED BY : Takuya IGAWA, JICA FIDP Team *
* PREPARED ON : August 8, 1993 *
*****

STORE .T. TO INTRO
FILENAME='GW'
ACTIVATE WINDOW COVER
DO WHILE .T.
  CLEAR
  &COL1
  @ 1,10 SAY 'JAPAN INTERNATIONAL COOPERATION AGENCY'
  @ 3,10 SAY 'Formulation of Irrigation Development Program (FIDP)'
  @ 5,10 SAY 'Inventory Survey'
  @ 7,10 SAY 'Groundwater Irrigation Scheme'
  @ 9,10 SAY '(Data Correction)'
  &COL0

  STORE SPACE(30) TO Q_NAME
  STORE SPACE(11) TO Q_ID_NO
  DO WHILE INTRO
    ANS = SPACE(1)
    @ 11, 10 clear
    @ 11, 10 SAY 'Index to search (1) ID Number (2) Scheme Name (0) Quit ' GET ANS
    @ 22, 10 say 'Select Index to search'
    @ 23, 10 say 'Type 0 and press <Enter> key to go back previous menu'
    READ
    DO CASE
      CASE ANS='0'
        DEACTIVATE WINDOW COVER
        RETURN
      CASE ANS='1'
        NDX_TAG='ID_NO'
      CASE ANS='2'
        NDX_TAG='NAME'
      OTHERWISE
        LOOP
    ENDCASE
    USE &FILENAME ORDER &NDX_TAG
    STORE .F. TO INTRO
  ENDDO
  IF ANS='1'
    @ 17, 10 SAY ' ID Number: ' GET Q_ID_NO
    @ 22, 10 say 'Enter ID Number for correction'
    @ 23, 10 SAY 'Press <Enter> key to quit menu'
    @ 24, 10 SAY 'Press <Esc> for help'
    READ
    IF READKEY()=12 .OR. READKEY()=268
      OK=.T.
      DO WIND WITH FILENAME1,NDX_TAG,'NUM1','Q_ID_NO','Q_NAME'
      IF .NOT. OK
        LOOP
      ENDIF
    ELSE
      IF Q_ID_NO = SPACE(11)
        DO RENUMBER
        CLOSE DATABASES
        DEACTIVATE WINDOW COVER
        *
        USE INFO
        GOTO 4
        REPL DATE2 WITH DATE()
        USE
        *
        RETURN
      ENDIF
      SEEK Q_ID_NO
      IF EOF()
        ? CHR(7)
        @ 22, 10 CLEAR
        &COL1
        @ 22, 10 SAY 'Record of '+ TRIM(Q_ID_NO) + ' does not exist in master file !'
        @ 23, 10 say 'please check ID Number again'
        &COL0
        WAIT

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

        LOOP
        ENDIF
*      ENDIF
        Q_NAME=NAME
        CLEAR
    ENDIF
    IF ANS='2'
        @ 17, 10 clear
        @ 17, 10 SAY ' Scheme Name      ' GET Q_NAME
        @ 22, 10 say 'Enter Scheme Name for correction'
        @ 23, 10 SAY 'Press <Enter> key to quit menu'
*      @ 24, 10 SAY 'Press <Esc> for help'
        READ
*      IF READKEY()=12 .OR. READKEY()=268
*          OK=.T.
*          DO WIND WITH FILENAME1,NDX_TAG,'NUM1','Q_ID_NO','Q_NAME'
*          IF .NOT. OK
*              LOOP
*          ENDIF
*      ELSE
        IF Q_NAME = SPACE(30)
*          DO RENUMBER
        CLOSE DATABASES
        DEACTIVATE WINDOW COVER
        *
        USE INFO
        GOTO 4
        REPL DATE2 WITH DATE()
        USE
        *
        RETURN
        ENDIF
        SEEK Q_NAME
        IF EOF()
            ? CHR(7)
            @ 22, 10 CLEAR
            &COL1
            @ 22, 10 SAY 'Record of '+ TRIM(Q_NAME) + ' does not exist in master file !'
            @ 23, 10 say 'Please check Scheme Name again'
            &COL0
            WAIT
            LOOP
        ENDIF
*      ENDIF
        Q_ID_NO=ID_NO
        CLEAR
    ENDIF

    @ 0, 0 SAY ' ID NO.:                               NAME OF SCHEME:

    &COL1
    @ 0, 10 SAY Q_ID_NO
    @ 0, 45 SAY Q_NAME
    &COL0

    DO WHILE .T.
        DO WHILE .T.
            ANS1 = 'N'
            @ 10, 0 CLEAR
            @ 10, 10 SAY 'Do you want to change ID Number ?' GET ANS1
            @ 22, 12 say 'Please type Y or N and press <Enter> key'
            READ
            CLEAR GETS
            IF ANS1 = 'Y' .OR. ANS1 = 'N'
                EXIT
            ENDIF
        ENDDO
        IF ANS1 = 'N'
            EXIT
        ENDIF
        IF ANS1 = 'Y'
            CID_NO = SPACE(11)
            @ 12, 10 clear
            @ 12, 10 SAY 'Enter correct ID Number 'GET CID_NO
            READ
            CLEAR GETS
            SEEK CID_NO
            IF .NOT. EOF()
                ? CHR(7)

```



Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

@ 22, 10 clear
@ 22, 10 SAY 'Record of '+ TRIM(CID_NO) + ' already exists in master file 1'
@ 23, 10 say 'Please check ID Number again'
SEEK Q_ID_NO
WAIT
LOOP
ENDIF
*
SEEK Q_ID_NO
Q_ID_NO = CID_NO
&COL1
@ 0, 10 SAY Q_ID_NO
&COL0
EXIT
ENDIF
ENDDO

DO WHILE .T.
DO WHILE .T.
ANS2 = 'N'
@ 14, 0 CLEAR
@ 14, 10 SAY 'Do you want to change Scheme Name ?' GET ANS2
@ 22, 12 say 'Please type Y or N and press <Enter> key'
READ
CLEAR GETS
IF ANS2 = 'Y' .OR. ANS2 = 'N'
EXIT
ENDIF
ENDDO
IF ANS2 = 'N'
EXIT
ENDIF
IF ANS2 = 'Y'
CNAME = SPACE(30)
@ 16, 10 clear
@ 16, 10 SAY 'Enter correct Scheme Name 'GET CNAME
READ
CLEAR GETS
Q_NAME=CNAME
EXIT
ENDIF
ENDDO
DO MASTER1
ENDDO

*=====
PROC MASTER1
*=====
* PROCEDURE NAME : MASTER1
* DESCRIPTION : MAIN BODY OF DATA CORRECTION FOR GROUNDWATER IRRIGATION SCHEME

CLEAR
@ 0, 0 SAY ' ID NO.: NAME OF SCHEME:
&COL1
@ 0, 10 SAY Q_ID_NO
@ 0, 45 SAY Q_NAME
&COL0

STORE .T. TO LOOP2
STORE .T. TO INP0
STORE .F. TO INP1,INP2,INP3,INP4,INP5,INP6

DO WHILE LOOP2
*-----
DO WHILE INP0
QQ11a =Q11a
QQ11b =Q11b
QQ12a =Q12a
QQ12b =Q12b
QQ131a=Q131a
QQ131b=Q131b
QQ132a=Q132a
QQ132b=Q132b
QQ133a=Q133a
QQ133b=Q133b
QQ134a=Q134a
QQ134b=Q134b
QQ135a=Q135a
QQ135b=Q135b

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

QQ136a=Q136a
QQ136b=Q136b
QQ137a=Q137a
QQ137b=Q137b
QQ138a=Q138a
QQ138b=Q138b
QQ21a =Q21a
QQ21b =Q21b
QQ221a1=Q221a1
QQ221a2=Q221a2
QQ221b1=Q221b1
QQ221b2=Q221b2
QQ221c1=Q221c1
QQ221c2=Q221c2
QQ221d1=Q221d1
QQ221d2=Q221d2
QQ222 =Q222
QQ231a1=Q231a1
QQ231b1=Q231b1
QQ231b2=Q231b2
QQ231c1=Q231c1
QQ231c2=Q231c2
QQ231d1=Q231d1
QQ231d2=Q231d2
QQ231e1=Q231e1
QQ231e2=Q231e2
QQ232 =Q232
QQ31a=Q31a
QQ31b=Q31b
QQ32a=Q32a
QQ32b=Q32b
QQ33a=Q33a
QQ33b=Q33b
QQ34a=Q34a
QQ34b=Q34b
QQ35a=Q35a
QQ35b=Q35b
QQ41a=Q41a
QQ41b=Q41b
QQ42a=Q42a
QQ42b=Q42b
QQ511=Q511
QQ512=Q512
QQ52 =Q52
QQ53 =Q53
STORE .F. TO INPO
STORE .T. TO INPI
ENDDO

DO WHILE INPI
  *-- Format Page: 1
  @ 1, 0 CLEAR TO 19, 79
  @ 1, 0 SAY "1. LOCATION"
  @ 3, 0 SAY "1.1 Province:"
  @ 4, 0 SAY " Code "
  @ 4,25 SAY " Name "
  @ 6, 0 SAY "1.2 Kabupaten:"
  @ 7, 0 SAY " Code "
  @ 7,27 SAY " Name "
  @ 9, 0 SAY "1.3 Kecamatan:"
  @ 10, 0 SAY " 1. "
  @ 10,16 SAY "Code"
  @ 10,20 SAY " "
  @ 10,29 SAY " Name "
  @ 11, 0 SAY " 2. Code "
  @ 11,29 SAY " Name "
  @ 12, 0 SAY " 3. Code "
  @ 12,29 SAY " Name "
  @ 13, 0 SAY " 4. Code "
  @ 13,29 SAY " Name "
  @ 14, 0 SAY " 5. Code "
  @ 14,29 SAY " Name "
  @ 15, 0 SAY " 6. Code "
  @ 15,29 SAY " Name "
  @ 16, 0 SAY " 7. Code "
  @ 16,29 SAY " Name "
  @ 17, 0 SAY " 8. Code "
  @ 17,29 SAY " Name "
DO LEGEND

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```
*STORE SPACE(2) TO QQ11A
*STORE SPACE(4) TO QQ12A
*STORE SPACE(6) TO QQ131A,QQ132A,QQ133A,QQ134A,QQ135A,QQ136A,QQ137A,QQ138A
*STORE SPACE(20) TO QQ11B,QQ12B,QQ131B,QQ132B,QQ133B,QQ134B,QQ135B,QQ136B,QQ137B,QQ138B
```

```
@ 4,23 GET QQ11a PICT "XX"
@ 4,37 GET QQ11b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 7,23 GET QQ12a PICT "XXXX"
@ 7,37 GET QQ12b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 10,23 GET QQ131a PICT "XXXXXX"
@ 10,37 GET QQ131b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 11,23 GET QQ132a PICT "XXXXXX"
@ 11,37 GET QQ132b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 12,23 GET QQ133a PICT "XXXXXX"
@ 12,37 GET QQ133b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 13,23 GET QQ134a PICT "XXXXXX"
@ 13,37 GET QQ134b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 14,23 GET QQ135a PICT "XXXXXX"
@ 14,37 GET QQ135b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 15,23 GET QQ136a PICT "XXXXXX"
@ 15,37 GET QQ136b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 16,23 GET QQ137a PICT "XXXXXX"
@ 16,37 GET QQ137b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 17,23 GET QQ138a PICT "XXXXXX"
@ 17,37 GET QQ138b PICT "XXXXXXXXXXXXXXXXXXXXX"
READ
```

```
OK = .T.
DO DIRECT WITH OK,SPACE(1), 'INP2'
IF .NOT. OK
  LOOP
ENDIF
```

```
STORE .F. TO INP1
EXIT
ENDDO
```

```
DO WHILE INP2
  *-- Format Page: 2
  @ 1, 0 CLEAR TO 19, 79
  @ 1, 0 SAY "2.STATUS OF SCHEME"
  @ 3, 0 SAY "2.1      Select Present Status of Sub-project (not limited to one answer):"
  @ 4, 0 SAY "      ( ) On-going/Construction or Extension"
  @ 5, 0 SAY "      ( ) Proposed/Construction or Extension"
  @ 7, 0 SAY "2.2      On-going/Construction or Extension:"
  @ 9, 0 SAY "2.2.1    History"
  @ 10, 0 SAY "      ( ) F/S for construction was conducted in 19"
  @ 11, 0 SAY "      ( ) D/D for construction was conducted in 19"
  @ 12, 0 SAY "      ( ) Construction was commenced in 19"
  @ 13, 0 SAY "      ( ) Construction was suspended in 19"
  @ 15, 0 SAY "2.2.2    Lending Agency: "
  DO LEGEND
  *store space(1) to qq21a,qq21b,qq221a1,qq221b1,qq221c1,qq221d1
  *store space(2) to qq221a2,qq221b2,qq221c2,qq221d2
  *store space(10) to qq222
```

```
@ 4, 9 GET QQ21a PICT "X"
@ 5, 9 GET QQ21b PICT "X"
@ 10, 9 GET QQ221a1 PICT "X"
@ 10,53 GET QQ221a2 PICT "XX"
@ 11, 9 GET QQ221b1 PICT "X"
@ 11,53 GET QQ221b2 PICT "XX"
@ 12, 9 GET QQ221c1 PICT "X"
@ 12,45 GET QQ221c2 PICT "XX"
@ 13, 9 GET QQ221d1 PICT "X"
@ 13,45 GET QQ221d2 PICT "XX"
@ 15,24 GET QQ222 PICT "XXXXXXXXXX"
READ
```

```
OK = .T.
DO DIRECT WITH OK, 'INP1', 'INP3'
IF .NOT. OK
  LOOP
ENDIF
```

```
STORE .F. TO INP2
EXIT
```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

ENDDO

DO WHILE INP3

```
*-- Format Page: 3
@ 1, 0 CLEAR TO 19, 79
@ 1, 0 SAY "2.STATUS OF SCHEME"
@ 3, 0 SAY "2.3 Proposed/Construction or Extension:"
@ 5, 0 SAY "2.3.1 History"
@ 6, 0 SAY " ( ) No investigation was made so far."
@ 7, 0 SAY " ( ) F/S for construction was conducted in 19"
@ 8, 0 SAY " ( ) D/D for construction was conducted in 19"
@ 9, 0 SAY " ( ) Construction will be commenced in 19"
@ 10, 0 SAY " ( ) Construction will be completed in 19"
@ 12, 0 SAY "2.3.2 Lending Agency: "
```

DO LEGEND

```
*STORE SPACE(1) TO QQ231A1,QQ231B1,QQ231C1,QQ231D1,QQ231E1
*STORE SPACE(2) TO QQ231B2,QQ231C2,QQ231D2,QQ231E2
*STORE SPACE(10) TO QQ232
```

```
@ 6, 9 GET QQ231a1 PICT "X"
@ 7, 9 GET QQ231b1 PICT "X"
@ 7,53 GET QQ231b2 PICT "XX"
@ 8, 9 GET QQ231c1 PICT "X"
@ 8,53 GET QQ231c2 PICT "XX"
@ 9, 9 GET QQ231d1 PICT "X"
@ 9,49 GET QQ231d2 PICT "XX"
@ 10, 9 GET QQ231e1 PICT "X"
@ 10,49 GET QQ231e2 PICT "XX"
@ 12,24 GET QQ232 PICT "XXXXXXXXXX"
READ
```

```
OK = .T.
DO DIRECT WITH OK, 'INP2', 'INP4'
IF .NOT. OK
  LOOP
ENDIF
```

STORE .F. TO INP3

EXIT

ENDDO

DO WHILE INP4

```
*-- Format Page: 4
@ 1, 0 CLEAR TO 19, 79
@ 1, 0 SAY "3. AREA"
@ 2, 0 SAY " Unit: ha"
@ 3, 0 SAY "-----"
@ 4, 0 SAY " Description Present Plan"
@ 5, 0 SAY "-----"
@ 6, 0 SAY "3.1 Irrigated Paddy Field "
@ 6,46 SAY " "
@ 8, 0 SAY "3.2 Rainfed Paddy Field "
@ 8,46 SAY " "
@ 10, 0 SAY "3.3 Upland Field "
@ 10,46 SAY " "
@ 12, 0 SAY "3.4 Others "
@ 12,46 SAY " "
@ 14, 0 SAY "3.5 Total "
@ 14,46 SAY " "
@ 15, 0 SAY "-----"
```

DO LEGEND

```
*STORE 0 TO QQ31A,QQ31B,QQ32A,QQ32B,QQ33A,QQ33B,QQ34A,QQ34B,QQ35A,QQ35B
```

```
@ 6,39 GET QQ31a PICT "999,999"
@ 6,54 GET QQ31b PICT "999,999"
@ 8,39 GET QQ32a PICT "999,999"
@ 8,54 GET QQ32b PICT "999,999"
@ 10,39 GET QQ33a PICT "999,999"
@ 10,54 GET QQ33b PICT "999,999"
@ 12,39 GET QQ34a PICT "999,999"
@ 12,54 GET QQ34b PICT "999,999"
@ 14,39 GET QQ35a PICT "999,999"
@ 14,54 GET QQ35b PICT "999,999"
READ
```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

OK = .T.
DO DIRECT WITH OK, 'INP3', 'INP5'
IF .NOT. OK
  LOOP
ENDIF

STORE .F. TO INP4
EXIT
ENDDO

DO WHILE INP5
  *-- Format Page: 5
  @ 1, 0 CLEAR
  @ 1, 0 SAY "4.      WELL CHARACTERISTICS"
  @ 3, 0 SAY "-----"
  @ 4, 0 SAY "      Description          Number      Average Depth"
  @ 5, 0 SAY "-----"
  @ 7, 0 SAY "4.1    Shallow (ITFW)          "
  @ 7,46 SAY " nos          "
  @ 7,63 SAY " m"
  @ 9, 0 SAY "4.2    Deep (DTW)           "
  @ 9,46 SAY " nos          "
  @ 9,63 SAY " m"
  @ 10, 0 SAY "-----"
  DO LEGEND

  *STORE 0 TO QQ41A,QQ41B,QQ42A,QQ42B

  @ 7,39 GET QQ41a PICT "999,999"
  @ 7,57 GET QQ41b PICT "999.99"
  @ 9,39 GET QQ42a PICT "999,999"
  @ 9,57 GET QQ42b PICT "999.99"
  READ

  OK = .T.
  DO DIRECT WITH OK, 'INP4', 'INP6'
  IF .NOT. OK
    LOOP
  ENDIF

  STORE .F. TO INP5
  EXIT
ENDDO

DO WHILE INP6
  *-- Format Page: 6
  @ 1, 0 CLEAR TO 19, 79
  @ 1, 0 SAY "5.      CONSTRUCTION COST"
  @ 2, 0 SAY "      Unit: Million Rp."
  @ 3, 0 SAY "-----"
  @ 4, 0 SAY "      Description          Construction "
  @ 5, 0 SAY "      Cost                  "
  @ 6, 0 SAY "-----"
  @ 7, 0 SAY "5.1    Well"
  @ 9, 0 SAY "5.1.1  Shallow Well          "
  @ 11, 0 SAY "5.1.2  Deep Well           "
  @ 13, 0 SAY "5.2    Canals             "
  @ 15, 0 SAY "5.3    Total              "
  @ 16, 0 SAY "-----"
  DO LEGEND

  *STORE 0 TO QQ511,QQ512,QQ52,QQ53

  @ 9,39 GET QQ511 PICT "999,999.99"
  @ 11,39 GET QQ512 PICT "999,999.99"
  @ 13,39 GET QQ52 PICT "999,999.99"
  @ 15,39 GET QQ53 PICT "999,999.99"
  READ

  OK = .T.
  DO DIRECT WITH OK, 'INP5', ' '
  IF .NOT. OK
    LOOP
  ENDIF
  STORE .F. TO INP6
  EXIT
ENDDO
*-----

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

ENDDO
IF READKEY()=270
  REPL ID_NO WITH Q_ID_NO,NAME WITH Q_NAME
  REPL R_NO WITH SUBSTR(ID_NO,1,1),P_NO WITH SUBSTR(ID_NO,1,2)
  REPL Q11a WITH QQ11a,Q11b WITH QQ11b,Q12a WITH QQ12a,Q12b WITH QQ12b
  REPL Q131a WITH QQ131a,Q131b WITH QQ131b,Q132a WITH QQ132a,Q132b WITH QQ132b
  REPL Q133a WITH QQ133a,Q133b WITH QQ133b,Q134a WITH QQ134a,Q134b WITH QQ134b
  REPL Q135a WITH QQ135a,Q135b WITH QQ135b,Q136a WITH QQ136a,Q136b WITH QQ136b
  REPL Q137a WITH QQ137a,Q137b WITH QQ137b,Q138a WITH QQ138a,Q138b WITH QQ138b
  REPL Q21a WITH QQ21a,Q21b WITH QQ21b,Q221a1 WITH QQ221a1,Q221a2 WITH QQ221a2
  REPL Q221b1 WITH QQ221b1,Q221b2 WITH QQ221b2,Q221c1 WITH QQ221c1,Q221c2 WITH QQ221c2
  REPL Q221d1 WITH QQ221d1,Q221d2 WITH QQ221d2,Q222 WITH QQ222
  REPL Q231a1 WITH QQ231a1,Q231b1 WITH QQ231b1,Q231b2 WITH QQ231b2,Q231c1 WITH QQ231c1
  REPL Q231c2 WITH QQ231c2,Q231d1 WITH QQ231d1,Q231d2 WITH QQ231d2,Q231e1 WITH QQ231e1
  REPL Q231e2 WITH QQ231e2,Q232 WITH QQ232
  REPL Q31a WITH QQ31a,Q31b WITH QQ31b,Q32a WITH QQ32a,Q32b WITH QQ32b
  REPL Q33a WITH QQ33a,Q33b WITH QQ33b,Q34a WITH QQ34a,Q34b WITH QQ34b
  REPL Q35a WITH QQ35a,Q35b WITH QQ35b
  REPL Q41a WITH QQ41a,Q41b WITH QQ41b,Q42a WITH QQ42a,Q42b WITH QQ42b
  REPL Q511 WITH QQ511,Q512 WITH QQ512,Q52 WITH QQ52,Q53 WITH QQ53
ENDIF
RETURN
* End-of-procedure : MASTER1
=====
PROC LEGEND
*
* PROCEDURE NAME : LEGEND
* DESCRIPTION : DISPLAY MENU FOR CURSOR MOVE
&COL2
@ 20, 10 TO 23,70 DOUBLE
@ 21, 11 say ' PgUp : Previous Page PgDn : Next Page
@ 22, 11 say ' Ctrl-End : Quit with Save Esc : Quit without Save'
IF INP1
  @ 21, 11 SAY SPACE(30)
ENDIF
IF INP6
  @ 21, 40 SAY SPACE(25)
ENDIF
&COLO
RETURN
* End-of-procedure : LEGEND
=====
PROC DIRECT
*
* PROCEDURE NAME : DIRECT
* DESCRIPTION : DIRECT COMPUTER TO MOVE PREVIOUS/NEXT PAGE
PARAMETER OK,KEY1,KEY2
DO CASE
CASE READKEY()=0 .OR. READKEY()=256 .OR. READKEY()=4 .OR. READKEY()=260 ;
  .OR. READKEY()=6 .OR. READKEY()=262
  IF KEY1=SPACE(1)
    OK = .F.
  ELSE
    STORE .T. TO &KEY1
  ENDIF
CASE READKEY()=1 .OR. READKEY()=257 .OR. READKEY()=5 .OR. READKEY()=261 ;
  .OR. READKEY()=7 .OR. READKEY()=263 .OR. READKEY()=15 .OR. READKEY()=271
  IF KEY2=SPACE(1)
    OK = .F.
  ELSE
    STORE .T. TO &KEY2
  ENDIF
CASE READKEY()=12 .OR. READKEY()=268 .OR. READKEY()=270
  STORE .F. TO LOOP2
OTHERWISE
  OK = .F.
ENDCASE
RETURN
* End-of-procedure : DIRECT
* End-of-file : GCOR.PRG
*****
* PROCEDURE NAME : GREF.PRG *
* DESCRIPTION : Browse of record for groundwater irrigation scheme *
* PROCEDURE : MASTER1,LEGEND,DIRECT *
* PREPARED BY : Takuya IGAWA, JICA FIDP Team *
* PREPARED ON : August 8, 1993 *

```

\*\*\*\*\*

```

ACTIVATE WINDOW COVER
STORE .T. TO INTRO
FILENAME='GW'
DO WHILE .T.
  CLEAR
  &COL1
  @ 1,10 SAY 'JAPAN INTERNATIONAL COOPERATION AGENCY'
  @ 3,10 SAY 'Formation of Irrigation Development Program (FIDP)'
  @ 5,10 SAY 'Inventory Survey'
  @ 7,10 SAY 'Groundwater Irrigation Scheme'
  @ 9,10 SAY '(Data Browse)'
  &COL0

STORE SPACE(30) TO Q_NAME
STORE SPACE(11) TO Q_ID_NO
DO WHILE INTRO
  ANS = SPACE(1)
  @ 11, 10 clear
  @ 11, 10 SAY 'Index to search (1) ID Number (2) Scheme Name (0) Quit ' GET ANS
  @ 22, 10 say 'Select Index to search'
  @ 23, 10 say 'Type 0 and press <Enter> key to go back previous menu'
  READ
  DO CASE
  CASE ANS='0'
    DEACTIVATE WINDOW COVER
    RETURN
  CASE ANS='1'
    NDX_TAG='ID_NO'
  CASE ANS='2'
    NDX_TAG='NAME'
  OTHERWISE
    LOOP
  ENDCASE
  USE &FILENAME ORDER &NDX_TAG
  STORE .F. TO INTRO
ENDDO
IF ANS='1'
  @ 17, 10 SAY ' ID Number: ' GET Q_ID_NO
  @ 22, 10 say 'Enter ID Number for browse'
  @ 23, 10 SAY 'Press <Enter> key to quit menu'
  @ 24, 10 SAY 'Press <Esc> for help'
  READ
  * IF READKEY()=12 .OR. READKEY()=268
  *   OK=.T.
  *   DO WIND WITH FILENAME1,NDX_TAG,'NUM1','Q_ID_NO','Q_NAME'
  *   IF .NOT. OK
  *     LOOP
  *   ENDIF
  * ELSE
  *   IF Q_ID_NO = SPACE(11)
  *     CLOSE DATABASES
  *     DEACTIVATE WINDOW COVER
  *     RETURN
  *   ENDIF
  *   SEEK Q_ID_NO
  *   IF EOF()
  *     ? CHR(7)
  *     @ 22, 10 CLEAR
  *     &COL1
  *     @ 22, 10 SAY 'Record of '+' TRIM(Q_ID_NO) + ' does not exist in master file !'
  *     @ 23, 10 say 'Please check ID Number again'
  *     &COL0
  *     WAIT
  *     LOOP
  *   ENDIF
  * ENDIF
  Q_NAME=NAME
  CLEAR
ENDIF
IF ANS='2'
  @ 17, 10 clear
  @ 17, 10 SAY ' Scheme Name ' GET Q_NAME
  @ 22, 10 say 'Enter Scheme Name for browse'
  @ 23, 10 SAY 'Press <Enter> key to quit menu'
  @ 24, 10 SAY 'Press <Esc> for help'
  READ
  * IF READKEY()=12 .OR. READKEY()=268

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

*      OK=.T.
*      DO WIND WITH FILENAME1,NDX_TAG,'NUM1','Q_ID_NO','Q_NAME'
*      IF .NOT. OK
*          LOOP
*      ENDIF
*      ELSE
*          IF Q_NAME = SPACE(30)
*              CLOSE DATABASES
*              DEACTIVATE WINDOW COVER
*              RETURN
*          ENDIF
*          SEEK Q_NAME
*          IF EOF()
*              ? CHR(7)
*              @ 22, 10 CLEAR
*              &COL1
*              @ 22, 10 SAY 'Record of '+ TRIM(Q_NAME) + ' does not exist in master file !'
*              @ 23, 10 say 'Please check Scheme Name again'
*              &COL0
*              WAIT
*              LOOP
*          ENDIF
*      ENDIF
*      Q_ID_NO=ID_NO
*      CLEAR
*      ENDIF
*      GOTO BOTM
*      REC_E = RECNO()
*      GOTO TOP
*      REC_S = RECNO()
*      IF ANS='1'
*          SEEK Q_ID_NO
*      ELSE
*          SEEK Q_NAME
*      ENDIF
*      DO MASTER1
*      ENDDO

```

```

*=====
PROC MASTER1
*=====

```

```

* PROCEDURE NAME : MASTER1
* DESCRIPTION    : MAIN BODY OF DATA BROWSE FOR GROUNDWATER IRRIGATION SCHEME

```

STORE .T. TO LOOP1

DO WHILE LOOP1

```

*-----
Q_ID_NO = ID_NO
Q_NAME  = NAME

```

```

CLEAR
@ 0, 0 SAY ' ID NO.:                NAME OF SCHEME:
&COL1
@ 0, 10 SAY Q_ID_NO
@ 0, 45 SAY Q_NAME
&COL0

```

STORE .T. TO LOOP2

STORE .T. TO INP1

STORE .F. TO INP2,INP3,INP4,INP5,INP6

DO WHILE LOOP2

\*-----

```

DO WHILE INP1
*-- Format Page: 1
@ 1, 0 CLEAR TO 19, 79
@ 1, 0 SAY "1.      LOCATION"
@ 3, 0 SAY "1.1     Province:"
@ 4, 0 SAY "                Code   "
@ 4,25 SAY "                Name   "
@ 6, 0 SAY "1.2     Kabupaten:"
@ 7, 0 SAY "                Code   "
@ 7,27 SAY "                Name   "
@ 9, 0 SAY "1.3     Kecamatan:"
@ 10, 0 SAY "                1.      "
@ 10,16 SAY "Code"
@ 10,20 SAY "                "
@ 10,29 SAY "                Name   "
@ 11, 0 SAY "                2.      Code   "

```



Sample of Computer Program  
Data Storage & Retrieval Sub-system

```
@ 11,29 SAY " Name "
@ 12, 0 SAY "      3.      Code "
@ 12,29 SAY " Name "
@ 13, 0 SAY "      4.      Code "
@ 13,29 SAY " Name "
@ 14, 0 SAY "      5.      Code "
@ 14,29 SAY " Name "
@ 15, 0 SAY "      6.      Code "
@ 15,29 SAY " Name "
@ 16, 0 SAY "      7.      Code "
@ 16,29 SAY " Name "
@ 17, 0 SAY "      8.      Code "
@ 17,29 SAY " Name "
```

```
&COL1
@ 4,23 SAY Q11a PICT "XX"
@ 4,37 SAY Q11b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 7,23 SAY Q12a PICT "XXXX"
@ 7,37 SAY Q12b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 10,23 SAY Q131a PICT "XXXXXX"
@ 10,37 SAY Q131b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 11,23 SAY Q132a PICT "XXXXXX"
@ 11,37 SAY Q132b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 12,23 SAY Q133a PICT "XXXXXX"
@ 12,37 SAY Q133b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 13,23 SAY Q134a PICT "XXXXXX"
@ 13,37 SAY Q134b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 14,23 SAY Q135a PICT "XXXXXX"
@ 14,37 SAY Q135b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 15,23 SAY Q136a PICT "XXXXXX"
@ 15,37 SAY Q136b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 16,23 SAY Q137a PICT "XXXXXX"
@ 16,37 SAY Q137b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ 17,23 SAY Q138a PICT "XXXXXX"
@ 17,37 SAY Q138b PICT "XXXXXXXXXXXXXXXXXXXXX"
```

```
&COLO
DO LEGEND
OK = .T.
DO DIRECT WITH OK,SPACE(1), 'INP2'
IF .NOT. OK
  LOOP
ENDIF
STORE .F. TO INP1
EXIT
ENDDO
```

```
DO WHILE INP2
*-- Format Page: 2
@ 1, 0 CLEAR TO 19, 79
@ 1, 0 SAY "2.STATUS OF SCHEME"
@ 3, 0 SAY "2.1 Select Present Status of Sub-project (not limited to one answer):"
@ 4, 0 SAY " ( ) On-going/Construction or Extension"
@ 5, 0 SAY " ( ) Proposed/Construction or Extension"
@ 7, 0 SAY "2.2 On-going/Construction or Extension:"
@ 9, 0 SAY "2.2.1 History"
@ 10, 0 SAY " ( ) F/S for construction was conducted in 19"
@ 11, 0 SAY " ( ) D/D for construction was conducted in 19"
@ 12, 0 SAY " ( ) Construction was commenced in 19"
@ 13, 0 SAY " ( ) Construction was suspended in 19"
@ 15, 0 SAY "2.2.2 Lending Agency: "
```

```
&COL1
@ 4, 9 SAY Q21a PICT "X"
@ 5, 9 SAY Q21b PICT "X"
@ 10, 9 SAY Q221a1 PICT "X"
@ 10,53 SAY Q221a2 PICT "XX"
@ 11, 9 SAY Q221b1 PICT "X"
@ 11,53 SAY Q221b2 PICT "XX"
@ 12, 9 SAY Q221c1 PICT "X"
@ 12,45 SAY Q221c2 PICT "XX"
@ 13, 9 SAY Q221d1 PICT "X"
@ 13,45 SAY Q221d2 PICT "XX"
@ 15,24 SAY Q222 PICT "XXXXXXXXXX"
```

```
&COLO
DO LEGEND
OK = .F.
DO DIRECT WITH OK, 'INP1', 'INP3'
IF .NOT. OK
```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

LOOP
ENDIF
STORE .F. TO INP2
EXIT
ENDDO

DO WHILE INP3
*-- Format Page: 3
@ 1, 0 CLEAR TO 19, 79
@ 1, 0 SAY "2.STATUS OF SCHEME"
@ 3, 0 SAY "2.3 Proposed/Construction or Extension:"
@ 5, 0 SAY "2.3.1 History"
@ 6, 0 SAY " ( ) No investigation was made so far."
@ 7, 0 SAY " ( ) F/S for construction was conducted in 19"
@ 8, 0 SAY " ( ) D/D for construction was conducted in 19"
@ 9, 0 SAY " ( ) Construction will be commenced in 19"
@ 10, 0 SAY " ( ) Construction will be completed in 19"
@ 12, 0 SAY "2.3.2 Lending Agency: "
```

```

&COL1
@ 6, 9 SAY Q231a1 PICT "X"
@ 7, 9 SAY Q231b1 PICT "X"
@ 7,53 SAY Q231b2 PICT "XX"
@ 8, 9 SAY Q231c1 PICT "X"
@ 8,53 SAY Q231c2 PICT "XX"
@ 9, 9 SAY Q231d1 PICT "X"
@ 9,49 SAY Q231d2 PICT "XX"
@ 10, 9 SAY Q231e1 PICT "X"
@ 10,49 SAY Q231e2 PICT "XX"
@ 12,24 SAY Q232 PICT "XXXXXXXXXX"
&COL0
```

DO LEGEND

```

OK = .T.
DO DIRECT WITH OK, 'INP2', 'INP4'
IF .NOT. OK
LOOP
ENDIF
STORE .F. TO INP3
EXIT
ENDDO
```

```

DO WHILE INP4
*-- Format Page: 4
@ 1, 0 CLEAR TO 19, 79
@ 1, 0 SAY "3. AREA"
@ 2, 0 SAY " Unit: ha"
@ 3, 0 SAY "-----"
@ 4, 0 SAY " Description Present Plan"
@ 5, 0 SAY "-----"
@ 6, 0 SAY "3.1 Irrigated Paddy Field "
@ 6,46 SAY " "
@ 8, 0 SAY "3.2 Rainfed Paddy Field "
@ 8,46 SAY " "
@ 10, 0 SAY "3.3 Upland Field "
@ 10,46 SAY " "
@ 12, 0 SAY "3.4 Others "
@ 12,46 SAY " "
@ 14, 0 SAY "3.5 Total "
@ 14,46 SAY " "
@ 15, 0 SAY "-----"
```

```

&COL1
@ 6,39 SAY Q31a PICT "999,999"
@ 6,54 SAY Q31b PICT "999,999"
@ 8,39 SAY Q32a PICT "999,999"
@ 8,54 SAY Q32b PICT "999,999"
@ 10,39 SAY Q33a PICT "999,999"
@ 10,54 SAY Q33b PICT "999,999"
@ 12,39 SAY Q34a PICT "999,999"
@ 12,54 SAY Q34b PICT "999,999"
@ 14,39 SAY Q35a PICT "999,999"
@ 14,54 SAY Q35b PICT "999,999"
&COL0
```

DO LEGEND

```

OK = .T.
DO DIRECT WITH OK, 'INP3', 'INP5'
IF .NOT. OK
```

```

LOOP
ENDIF
STORE .F. TO INP4
EXIT
ENDDO

```

```

DO WHILE INP5
*-- Format Page: 5
@ 1, 0 CLEAR TO 19, 79
@ 1, 0 SAY "4. WELL CHARACTERISTICS"
@ 3, 0 SAY "-----"
@ 4, 0 SAY "      Description                Number      Average Depth"
@ 5, 0 SAY "-----"
@ 7, 0 SAY "4.1  Shallow (ITW)                "
@ 7,46 SAY " noa      "
@ 7,63 SAY " m"
@ 9, 0 SAY "4.2  Deep (DTW)                "
@ 9,46 SAY " noa      "
@ 9,63 SAY " m"
@ 10, 0 SAY "-----"

```

```

&COL1
@ 7,39 SAY Q41a PICT "999,999"
@ 7,57 SAY Q41b PICT "999.99"
@ 9,39 SAY Q42a PICT "999,999"
@ 9,57 SAY Q42b PICT "999.99"
&COL0

```

DO LEGEND

```

OK = .T.
DO DIRECT WITH OK, 'INP4', 'INP6'
IF .NOT. OK
LOOP
ENDIF
STORE .F. TO INP5
EXIT

```

ENDDO

```

DO WHILE INP6
*-- Format Page: 6
@ 1, 0 CLEAR TO 19, 79
@ 1, 0 SAY "5. CONSTRUCTION COST"
@ 2, 0 SAY "      Unit: Million Rp."
@ 3, 0 SAY "-----"
@ 4, 0 SAY "      Description                Construction "
@ 5, 0 SAY "      Cost                        "
@ 6, 0 SAY "-----"
@ 7, 0 SAY "5.1  Well"
@ 9, 0 SAY "5.1.1 Shallow Well"
@ 11, 0 SAY "5.1.2 Deep Well"
@ 13, 0 SAY "5.2  Canals"
@ 15, 0 SAY "5.3  Total"
@ 16, 0 SAY "-----"

```

```

&COL1
@ 9,39 SAY Q511 PICT "999,999.99"
@ 11,39 SAY Q512 PICT "999,999.99"
@ 13,39 SAY Q52 PICT "999,999.99"
@ 15,39 SAY Q53 PICT "999,999.99"
&COL0

```

DO LEGEND

```

OK = .T.
DO DIRECT WITH OK, 'INP5', SPACE(1)
IF .NOT. OK
LOOP
ENDIF
STORE .F. TO INP6
EXIT

```

ENDDO

ENDDO

ENDDO

RETURN

\* End-of-procedure : MASTER1

\*\*\*\*\*

Sample of Computer Program  
Data Storage & Retrieval Sub-system

PROC LEGEND

```

=====
* PROCEDURE NAME : LEGEND
* DESCRIPTION   : DISPLAY MENU FOR CURSOR MOVE
&COL2
@ 20, 10 TO 24,60 DOUBLE
@ 21, 11 say ' '+chr(24)+' : Previous record   '+chr(25)+' : Next record '
@ 22, 11 say ' '+chr(27)+' : Previous page   '+chr(26)+' : Next page '
@ 23, 11 say 'Esc' : Quit to previous menu
IF RECNO(=REC_S
  @ 21, 11 SAY SPACE(25)
ENDIF
IF RECNO(=REC_E
  @ 21, 40 SAY SPACE(20)
ENDIF
IF INP1
  @ 22, 11 SAY SPACE(25)
ENDIF
IF INP6
  @ 22, 40 SAY SPACE(20)
ENDIF
&COL0
RETURN

* End-of-procedure : LEGEND

```

PROC DIRECT

```

=====
* PROCEDURE NAME : DIRECT
* DESCRIPTION   : DIRECT COMPUTER TO MOVE PREVIOUS/NEXT PAGE AND RECORD
PARAMETER OK,KEY1,KEY2
ANSWER = SPACE(1)
@ 0, 0 GET ANSWER
READ
DO CASE
*PREVIOUS PAGE
CASE READKEY(=0
  IF KEY1=SPACE(1)
    OK = .F.
  ELSE
    STORE .T. TO &KEY1
  ENDIF
*NEXT PAGE
CASE READKEY(=1
  IF KEY2=SPACE(1)
    OK = .F.
  ELSE
    STORE .T. TO &KEY2
  ENDIF
*PREVIOUS RECORD
CASE READKEY(=4
  IF RECNO() <> REC_S
    SKIP -1
    STORE .F. TO LOOP2
  ELSE
    OK = .F.
  ENDIF
*NEXT RECORD
CASE READKEY(=5
  IF RECNO() <> REC_E
    SKIP +1
    STORE .F. TO LOOP2
  ELSE
    OK = .F.
  ENDIF
*GOTO PREVIOUS MENU
CASE READKEY(=12
  STORE .F. TO LOOP1,LOOP2
OTHERWISE
  OK = .F.
ENDCASE
RETURN

```

\* End-of-procedure : DIRECT

\* End-of-file : GREF.PRG

\*\*\*\*\*

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

* PROCEDURE NAME : GDEL.PRG *
* DESCRIPTION : Delete Record of Groundwater Irrigation Scheme *
* PREPARED BY : Takuya Igawa, JICA FIDP Team *
* PREPARED ON : August 8, 1993 *
*****
ACTIVATE WINDOW COVER
STORE .T. TO INTRO
FILENAME='GW'
DO WHILE .T.
  CLEAR
  &COL1
  @ 1,10 SAY 'JAPAN INTERNATIONAL COOPERATION AGENCY'
  @ 3,10 SAY 'Formation of Irrigation Development Program (FIDP)'
  @ 5,10 SAY 'Inventory Survey'
  @ 7,10 SAY 'Groundwater Irrigation Scheme'
  @ 9,10 SAY '(Data Deletion)'
  &COL0

  STORE SPACE(30) TO Q_NAME
  STORE SPACE(11) TO Q_ID_NO
  DO WHILE INTRO
    ANS = SPACE(1)
    @ 11, 10 clear
    @ 11, 10 SAY 'Index to search (1) ID Number (2) Scheme Name (0) Quit ' GET ANS
    @ 22, 10 say 'Select Index to search'
    @ 23, 10 say 'Type 0 and press <Enter> key to go back previous menu'
    READ
    DO CASE
      CASE ANS='0'
        DEACTIVATE WINDOW COVER
        RETURN
      CASE ANS='1'
        NDX_TAG='ID_NO'
      CASE ANS='2'
        NDX_TAG='NAME'
      OTHERWISE
        LOOP
    ENDCASE
    USE &FILENAME ORDER &NDX_TAG
    STORE .F. TO INTRO
  ENDDO
  IF ANS='1'
    @ 17, 10 clear
    @ 17, 10 SAY ' ID Number: ' GET Q_ID_NO
    @ 22, 10 say 'Enter ID Number for deletion'
    @ 23, 10 SAY 'Press <Enter> key to quit'
    @ 24, 10 SAY 'Press <Esc> to help'
    READ
    IF READKEY()=12 .OR. READKEY()=268
      OK=.T.
      DO WIND WITH FILENAME1,NDX_TAG,'NUM1','Q_ID_NO','Q_NAME'
      IF .NOT. OK
        LOOP
      ENDF
    ELSE
      IF Q_ID_NO = SPACE(11)
        DO RENUMBER
        CLOSE DATABASES
        DEACTIVATE WINDOW COVER
        *
        USE INFO
        GOTO 4
        REPL DATE2 WITH DATE()
        USE
        *
        RETURN
      ENDF
      SEEK Q_ID_NO
      IF EOF()
        ? CHR(7)
        @ 22, 10 CLEAR
        &COL1
        @ 22, 10 SAY 'Record of '+ TRIM(Q_ID_NO) + ' does not exist in master file !'
        @ 23, 10 say 'Please check ID Number again'
        &COL0
        WAIT
        LOOP
      ENDF
    *
  ENDF

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

Q_NAME=NAME
CLEAR
ENDIF
IF ANS='2'
  @ 17, 10 clear
  @ 17, 10 SAY ' Scheme Name      ' GET Q_NAME
  @ 22, 10 say 'Enter Scheme Name for deletion'
  @ 23, 10 SAY 'Press <Enter> key to quit menu'
  @ 24, 10 SAY 'Press <Esc> for help'
*
  READ
  IF READKEY()=12 .OR. READKEY()=268
  *
  *   OK=.T.
  *   DO WIND WITH FILENAME1,NDX_TAG,'NUM1','Q_ID_NO','Q_NAME'
  *   IF .NOT. OK
  *     LOOP
  *   ENDIF
  *
  ELSE
  *
  *   IF Q_NAME = SPACE(30)
  *     DO RENUMBER
  *     CLOSE DATABASES
  *     DEACTIVATE WINDOW COVER
  *
  *     USE INFO
  *     GOTO 4
  *     REPL DATE2 WITH DATE()
  *     USE
  *
  *     RETURN
  *   ENDIF
  *   SEEK Q_NAME
  *   IF EOF()
  *     ? CHR(7)
  *     @ 22, 10 CLEAR
  *     &COL1
  *     @ 22, 10 SAY 'Record of '+' TRIM(Q_NAME) + ' does not exist in master file 1'
  *     @ 23, 10 say 'Please check Scheme Name again'
  *     &COL0
  *     WAIT
  *     LOOP
  *   ENDIF
  *
  *   ENDIF
  *   Q_ID_NO=ID_NO
  *   CLEAR
  *
  *   ENDIF
  *
  *   @ 0, 0 SAY ' ID NO.:                NAME OF SCHEME:
  *
  *   &COL1
  *   @ 0, 10 SAY Q_ID_NO
  *   @ 0, 45 SAY Q_NAME
  *   &COL0
  *
  *   DO WHILE .T.
  *     DO WHILE .T.
  *       ANS1 = 'N'
  *       @ 10, 0 CLEAR
  *       @ 10, 10 SAY 'Do you want to delete this record ?' GET ANS1
  *       @ 22, 10 say 'Please type Y or N and press <Enter> key'
  *       READ
  *       CLEAR GETS
  *       IF ANS1 = 'Y' .OR. ANS1 = 'N'
  *         EXIT
  *       ENDIF
  *     ENDDO
  *     IF ANS1 = 'N'
  *       EXIT
  *     ENDIF
  *     IF ANS1 = 'Y'
  *       DELE
  *       EXIT
  *     ENDIF
  *   ENDDO
  *
  *   ENDDO
  * End-of-file : GDEL.PRG
  *
  * *****
  * PROCEDURE NAME : GPRT.PRG
  * DESCRIPTION    : Print record of groundwater irrigation scheme
  * PROCEDURE FILE : HEADER,MASTER1
  *

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

* PREPARED BY      : Takuya IGAWA, JICA FIDP Team      *
* PREPARED ON      : August 8, 1993                    *
*****
FILENAME = 'GW'
ACTIVATE WINDOW COVER
STORE .T. TO INTRO0
STORE .F. TO INTRO1,INTRO2
DO WHILE .T.
  STORE SPACE(30) TO QNAME,QNAME1,QNAME2
  STORE SPACE(11) TO QID_NO,QID_NO1,QID_NO2

  DO WHILE INTRO0
    CLEAR
    &COL1
    @ 1,10 SAY 'JAPAN INTERNATIONAL COOPERATION AGENCY'
    @ 3,10 SAY 'Formation of Irrigation Development Program (FIDP)'
    @ 5,10 SAY 'Inventory Survey'
    @ 7,10 SAY 'Groundwater Irrigation Scheme'
    @ 9,10 SAY '(Data Printout)'
    &COL0
    STORE .F. TO INTRO0
    STORE .T. TO INTRO1
  ENDDO

  DO WHILE INTRO1
    ANS = SPACE(1)
    @ 11, 10 CLEAR
    @ 11, 10 SAY 'Index to search (1) ID Number (2) Scheme Name (0) Quit ' GET ANS
    @ 22, 10 say 'Select Index to search'
    @ 23, 10 say 'Type 0 and press <Enter> key to go back previous menu'
    READ
    DO CASE
      CASE ANS='0'
        CLOSE DATABASES
        DEACTIVATE WINDOW COVER
        RETURN
      CASE ANS='1'
        NDX_TAG='ID_NO'
      CASE ANS='2'
        NDX_TAG='NAME'
    OTHERWISE
      LOOP
    ENDCASE
    USE &FILENAME ORDER &NDX_TAG
    STORE .F. TO INTRO1
    STORE .T. TO INTRO2
  ENDDO

  DO WHILE INTRO2
    @ 13, 10 CLEAR
    @ 13, 10 SAY '1. One Sheet Print 2. Range Print 0. Previous Menu [ ]'
    @ 22, 10 SAY 'SELECT NO. (1 OR 2 OR 0)'
    @ 23, 10 say 'Type 0 and press <Enter> key to go back previous menu'
    QNO = SPACE(1)
    @ 13, 63 GET QNO PICT '9'
    READ
    CLEAR GETS
    IF QNO = '1' .OR. QNO = '2' .OR. QNO = '0'
      STORE .F. TO INTRO2
      EXIT
    ENDIF
  ENDDO

  IF QNO = '0'
    STORE .T. TO INTRO1
    LOOP
  ENDIF

  DO CASE
  CASE ANS = '1'
    IF QNO = '1'
      @ 15, 10 CLEAR
      @ 15, 10 SAY 'Enter ID Number:'
      @ 23, 10 SAY 'Press <Enter> key to go back to previous menu'
      @ 24, 10 SAY 'Press <Esc> for help'
      @ 15, 26 GET QID_NO
      READ
      IF READKEY()=12 .OR. READKEY()=268
        OK=.T.

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

*          DO WIND WITH FILENAME,NDX_TAG,'NUM1','QID_NO','ONAME'
*          IF .NOT. OK
*              STORE .T. TO INTRO2
*              LOOP
*          ENDIF
*          @ 15, 26 SAY QID_NO
*
*      ELSE
*          IF QID_NO = SPACE(11)
*              STORE .T. TO INTRO2
*              LOOP
*          ENDIF
*          SEEK QID_NO
*          IF EOP()
*              ? CHR(7)
*              @ 22, 10 CLEAR
*              &COLL
*              @ 22, 10 SAY 'ID Number of '+TRIM(QID_NO)+' is not found in master file !'
*              @ 23, 10 say 'Please check ID number again'
*              &COL0
*              WAIT
*              STORE .T. TO INTRO2
*              LOOP
*          ENDIF
*      ENDIF
*
*      ok = .T.
*      DO printset WITH ok
*      IF .NOT. ok
*          CLOSE DATABASES
*          DEACTIVATE WINDOW COVER
*          SET DEVICE TO SCREEN
*          RETURN
*      ENDIF
*      ON ESCAPE DO prtstp
*      SET DEVICE TO SCREEN
*      DO prtmsg WITH .T.
*
*      SET DEVICE TO PRINT
*      PAGE = 0
*
*      SEEK QID_NO
*      DO MASTER1
*
*      ON ESCAPE
*      DO prtmsg WITH .P.
*      SET DEVICE TO SCREEN
*      ENDIF
*
*      IF QNO = '2'
*          @ 15, 10 CLEAR
*          @ 15, 10 SAY 'Enter ID Number to start print'
*          @ 23, 10 SAY 'Press <Enter> key to go back to previous menu'
*          @ 24, 10 SAY 'Press <Esc> for help'
*          @ 15, 45 GET QID_NO1
*          READ
*          IF READKEY()=12 .OR. READKEY()=268
*              OK=.T.
*              DO WIND WITH FILENAME,NDX_TAG,'NUM1','QID_NO1','QNAME1'
*              IF .NOT. OK
*                  STORE .T. TO INTRO2
*                  LOOP
*              ENDIF
*              @ 15, 45 SAY QID_NO1
*          ELSE
*              IF QID_NO1 = SPACE(11)
*                  STORE .T. TO INTRO2
*                  LOOP
*              ENDIF
*              SEEK QID_NO1
*              IF EOP()
*                  ? CHR(7)
*                  @ 22, 10 CLEAR
*                  &COLL
*                  @ 22, 10 SAY 'ID Number of '+TRIM(QID_NO1)+' is not found in master file !'
*                  @ 23, 10 say 'Please check ID Number again'
*                  &COL0
*                  WAIT
*                  STORE .T. TO INTRO2
*                  LOOP
*              ENDIF
*          ENDIF

```



```

*      ENDIF
*      @ 17, 10 CLEAR
*      @ 17, 10 SAY 'Enter ID Number to end print'
*      @ 23, 10 SAY 'Press <Enter> key to go back to previous menu'
*      @ 24, 10 SAY 'Press <Esc> for help'
*      @ 17, 45 GET QID_NO2
*      READ
*      IF READKEY()=12 .OR. READKEY()=268
*      OK=.T.
*      DO WIND WITH FILENAME,NDX_TAG,'NUM1','QID_NO2','QNAME2'
*      IF .NOT. OK
*      STORE .T. TO INTRO2
*      LOOP
*      ENDIF
*      @ 17, 45 SAY QID_NO2
*      ELSE
*      IF QID_NO2 = SPACE(11)
*      STORE .T. TO INTRO2
*      LOOP
*      ENDIF
*      SEEK QID_NO2
*      IF EOF()
*      ? CHR(7)
*      @ 22, 10 CLEAR
*      &COL1
*      @ 22, 10 SAY 'ID Number '+TRIM(QID_NO2)+' is not found in master file !'
*      @ 23, 10 say 'Please check ID number again'
*      &COL0
*      WAIT
*      STORE .T. TO INTRO2
*      LOOP
*      ENDIF
*      ENDIF
*      IF QID_NO1 > QID_NO2
*      ? CHR(7)
*      @ 22, 10 CLEAR
*      &COL1
*      @ 22, 10 SAY 'Invalid Range !!'
*      @ 23, 10 say 'Please enter print range again'
*      &COL0
*      WAIT
*      STORE .T. TO INTRO2
*      LOOP
*      ENDIF
*      *-----
*      SELE A
*      *-----
*      SET FILTER TO QID_NO1 <= ID_NO .AND. ID_NO <= QID_NO2
*      GOTO TOP
*
*      ok = .T.
*      DO printset WITH ok
*      IF .NOT. ok
*      DEACTIVATE WINDOW COVER
*      CLOSE DATABASES
*      SET DEVICE TO SCREEN
*      RETURN
*      ENDIF
*      ON ESCAPE DO prtstp
*      SET DEVICE TO SCREEN
*      DO prtmsg WITH .T.
*
*      SET DEVICE TO PRINT
*      DO WHILE .T.
*      *-----
*      SELE A
*      *-----
*      PAGE = 0
*      DO MASTER1
*
*      *-----
*      SELE A
*      *-----
*      SKIP +1
*      IF EOF()
*      EXIT
*      ENDIF
*      ENDDO

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

ON ESCAPE
DO prtmsg WITH .F.
SET FILTER TO
SET DEVICE TO SCREEN
ENDIF

CASE ANS='2'
  IF QNO = '1'
    @ 15, 10 CLEAR
    @ 15, 10 SAY 'Enter Scheme Name:'
    @ 23, 10 SAY 'Press <Enter> key to go back to previous menu'
    * @ 24, 10 SAY 'Press <Esc> for help'
    @ 15, 28 GET QNAME
  READ
  * IF READKEY()=12 .OR. READKEY()=268
  * OK=.T.
  * DO WIND WITH FILENAME,NDX_TAG,'NUM2','QID_NO','QNAME'
  * IF .NOT. OK
  * STORE .T. TO INTRO2
  * LOOP
  * ENDIF
  * @ 15, 28 SAY QNAME
  * ELSE
  * IF QNAME = SPACE(30)
  * STORE .T. TO INTRO2
  * LOOP
  * ENDIF
  * SEEK QNAME
  * IF EOF()
  * ? CHR(7)
  * @ 22, 10 CLEAR
  * &COL1
  * @ 22, 10 SAY 'Scheme Name '+TRIM(QNAME)+ ' is not found !'
  * @ 23, 10 say 'Please check Scheme Name again'
  * &COL0
  * WAIT
  * STORE .T. TO INTRO2
  * LOOP
  * ENDIF
  * ENDIF
  * ok = .T.
  * DO printset WITH ok
  * IF .NOT. ok
  * CLOSE DATABASES
  * DEACTIVATE WINDOW COVER
  * SET DEVICE TO SCREEN
  * RETURN
  * ENDIF
  * ON ESCAPE DO prtstp
  * SET DEVICE TO SCREEN
  * DO prtmsg WITH .T.

  SET DEVICE TO PRINT
  PAGE = 0

  SEEK QNAME
  DO MASTER1

  ON ESCAPE
  DO prtmsg WITH .F.
  SET DEVICE TO SCREEN
  ENDIF

  IF QNO = '2'
    @ 15, 10 CLEAR
    @ 15, 10 SAY 'Enter Scheme Name to start print'
    @ 23, 10 SAY 'Press <Enter> key to go back to previous menu'
    * @ 24, 10 SAY 'Press <Esc> for help'
    @ 15, 45 GET QNAME1
  READ
  * IF READKEY()=12 .OR. READKEY()=268
  * OK=.T.
  * DO WIND WITH FILENAME,NDX_TAG,'NUM2','QID_NO1','QNAME1'
  * IF .NOT. OK
  * STORE .T. TO INTRO2
  * LOOP
  * ENDIF
  * @ 15, 45 SAY QNAME1
  * ELSE

```

```

IF QNAME1 = SPACE(30)
  STORE .T. TO INTRO2
  LOOP
ENDIF
SEEK QNAME1
IF EOF()
  ? CHR(7)
  @ 22, 10 CLEAR
  &COL1
  @ 22, 10 SAY 'Scheme Name '+TRIM(QNAME1)+' is not found in master file !'
  @ 23, 10 say 'Please check Scheme Name again'
  &COL0
  WAIT
  STORE .T. TO INTRO2
  LOOP
ENDIF
*
ENDIF
@ 17, 10 CLEAR
@ 17, 10 SAY 'Enter Scheme Name to end print'
@ 23, 10 SAY 'Press <Enter> key to go back to previous menu'
*
@ 24, 10 SAY 'Press <Esc> to help'
@ 17, 45 GET QNAME2
READ
*
IF READKEY()=12 .OR. READKEY()=268
*
  OK=.T.
  DO WIND WITH FILENAME,NDX_TAG,'NUM1','QID_NO2','QNAME2'
  IF .NOT. OK
  *
    STORE .T. TO INTRO2
  *
    LOOP
  *
  ENDIF
  @ 17, 45 SAY QID_NO2
*
ELSE
  IF QNAME2 = SPACE(30)
  *
    STORE .T. TO INTRO2
  *
    LOOP
  *
  ENDIF
  SEEK QNAME2
  IF EOF()
  *
    ? CHR(7)
  *
    @ 22, 10 CLEAR
  *
    &COL1
  *
    @ 22, 10 SAY 'Scheme Name of '+TRIM(QNAME2)+' is not found in master file !'
  *
    @ 23, 10 say 'Please check Scheme Name again'
  *
    &COL0
  *
    WAIT
  *
    STORE .T. TO INTRO2
  *
    LOOP
  *
  ENDIF
  ENDIF
*
IF QNAME1 > QNAME2
  ? CHR(7)
  @ 22, 10 CLEAR
  &COL1
  @ 22, 10 SAY 'Invalid Range !!'
  @ 23, 10 say 'Please enter print range again'
  &COL0
  WAIT
  STORE .T. TO INTRO2
  LOOP
ENDIF
*-----
SELE A
*-----
SET FILTER TO QNAME1 <= NAME .AND. NAME <= QNAME2
GOTO TOP

ok = .T.
DO printset WITH ok
IF .NOT. ok
  DEACTIVATE WINDOW COVER
  CLOSE DATABASES
  SET DEVICE TO SCREEN
  RETURN
ENDIF
ON ESCAPE DO prtstp
SET DEVICE TO SCREEN
DO prtmsg WITH .T.

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

SET DEVICE TO PRINT
DO WHILE .T.
*-----
SELE A
*-----
PAGE = 0
DO MASTER1

*-----
SELE A
*-----
SKIP +1
IF EOF()
EXIT
ENDIF
ENDDO
ON ESCAPE
DO prtmeg WITH .F.
SET FILTER TO
SET DEVICE TO SCREEN
ENDIF
ENDCASE
STORE .T. TO INTRO2
ENDDO
=====
PROC HEADER
=====
* PROCEDURE NAME : HEADER
* DESCRIPTION : PRINT HEADER OF GROUNDWATER IRRIGATION SCHEME RECORDS
PAGE = PAGE + 1
@ PROW()+1, 0 SAY 'Groundwater Irrigation Scheme'
@ PROW() , 71 SAY PAGE PICT '99'
@ PROW()+1, 0 SAY 'NAME : _____' ID NO. : _____
@ PROW() , 7 SAY NAME
@ PROW() , 51 SAY ID_NO
RETURN
* End-of-procedure : HEADER

=====
PROC MASTER1
=====
* PROCEDURE NAME : MASTER1
* DESCRIPTION : MAIN BODY OF DATA PRINT FOR GROUNDWATER IRRIGATION SCHEME
DO HEADER
@ PROW()+2, 0 SAY "1. LOCATION"
@ PROW()+2, 0 SAY "1.1 Province:"
@ PROW()+1, 0 SAY " Code "
@ PROW() ,25 SAY " Name "
@ PROW() ,23 SAY Q11a PICT "XX"
@ PROW() ,37 SAY Q11b PICT "XXXXXXXXXXXXXXXXXXXXXXXXX"
@ PROW()+2, 0 SAY "1.2 Kabupaten:"
@ PROW()+1, 0 SAY " Code "
@ PROW() ,27 SAY " Name "
@ PROW() ,23 SAY Q12a PICT "XXXX"
@ PROW() ,37 SAY Q12b PICT "XXXXXXXXXXXXXXXXXXXXXXXXX"
@ PROW()+2, 0 SAY "1.3 Kecamatan:"
@ PROW()+1, 0 SAY " 1. "
@ PROW() ,16 SAY "Code"
@ PROW() ,20 SAY " "
@ PROW() ,29 SAY " Name "
@ PROW() ,23 SAY Q131a PICT "XXXXXX"
@ PROW() ,37 SAY Q131b PICT "XXXXXXXXXXXXXXXXXXXXXXXXX"
@ PROW()+1, 0 SAY " 2. Code "
@ PROW() ,29 SAY " Name "
@ PROW() ,23 SAY Q132a PICT "XXXXXX"
@ PROW() ,37 SAY Q132b PICT "XXXXXXXXXXXXXXXXXXXXXXXXX"
@ PROW()+1, 0 SAY " 3. Code "
@ PROW() ,29 SAY " Name "
@ PROW() ,23 SAY Q133a PICT "XXXXXX"
@ PROW() ,37 SAY Q133b PICT "XXXXXXXXXXXXXXXXXXXXXXXXX"
@ PROW()+1, 0 SAY " 4. Code "
@ PROW() ,29 SAY " Name "
@ PROW() ,23 SAY Q134a PICT "XXXXXX"
@ PROW() ,37 SAY Q134b PICT "XXXXXXXXXXXXXXXXXXXXXXXXX"
@ PROW()+1, 0 SAY " 5. Code "
@ PROW() ,29 SAY " Name "
@ PROW() ,23 SAY Q135a PICT "XXXXXX"
@ PROW() ,37 SAY Q135b PICT "XXXXXXXXXXXXXXXXXXXXXXXXX"
@ PROW()+1, 0 SAY " 6. Code "

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```

@ PROW() ,29 SAY " Name "
@ PROW() ,23 SAY Q136a PICT "XXXXXX"
@ PROW() ,37 SAY Q136b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ PROW()+1 , 0 SAY " 7. Code "
@ PROW() ,29 SAY " Name "
@ PROW() ,23 SAY Q137a PICT "XXXXXX"
@ PROW() ,37 SAY Q137b PICT "XXXXXXXXXXXXXXXXXXXXX"
@ PROW()+1 , 0 SAY " 8. Code "
@ PROW() ,29 SAY " Name "
@ PROW() ,23 SAY Q138a PICT "XXXXXX"
@ PROW() ,37 SAY Q138b PICT "XXXXXXXXXXXXXXXXXXXXX"

@ PROW()+2 , 0 SAY "2. STATUS OF SCHEME"
@ PROW()+2 , 0 SAY "2.1 Select Present Status of Sub-project (not limited to one answer):"
@ PROW()+1 , 0 SAY " ( ) On-going/Construction or Extension"
@ PROW() , 9 SAY Q21a PICT "X"
@ PROW()+1 , 0 SAY " ( ) Proposed/Construction or Extension"
@ PROW() , 9 SAY Q21b PICT "X"
@ PROW()+2 , 0 SAY "2.2 On-going/Construction or Extension:"
@ PROW()+2 , 0 SAY "2.2.1 History"
@ PROW()+1 , 0 SAY " ( ) F/S for construction was conducted in 19"
@ PROW() , 9 SAY Q221a1 PICT "X"
@ PROW() ,53 SAY Q221a2 PICT "XX"
@ PROW()+1 , 0 SAY " ( ) D/D for construction was conducted in 19"
@ PROW() , 9 SAY Q221b1 PICT "X"
@ PROW() ,53 SAY Q221b2 PICT "XX"
@ PROW()+1 , 0 SAY " ( ) Construction was commenced in 19"
@ PROW() , 9 SAY Q221c1 PICT "X"
@ PROW() ,45 SAY Q221c2 PICT "XX"
@ PROW()+1 , 0 SAY " ( ) Construction was suspended in 19"
@ PROW() , 9 SAY Q221d1 PICT "X"
@ PROW() ,45 SAY Q221d2 PICT "XX"
@ PROW()+2 , 0 SAY "2.2.2 Lending Agency: "
@ PROW() ,24 SAY Q222 PICT "XXXXXXXXXX"
@ PROW()+2 , 0 SAY "2.3 Proposed/Construction or Extension:"
@ PROW()+2 , 0 SAY "2.3.1 History"
@ PROW()+1 , 0 SAY " ( ) No investigation was made so far."
@ PROW() , 9 SAY Q231a1 PICT "X"
@ PROW()+1 , 0 SAY " ( ) F/S for construction was conducted in 19"
@ PROW() , 9 SAY Q231b1 PICT "X"
@ PROW() ,53 SAY Q231b2 PICT "XX"
@ PROW()+1 , 0 SAY " ( ) D/D for construction was conducted in 19"
@ PROW() , 9 SAY Q231c1 PICT "X"
@ PROW() ,53 SAY Q231c2 PICT "XX"
@ PROW()+1 , 0 SAY " ( ) Construction will be commenced in 19"
@ PROW() , 9 SAY Q231d1 PICT "X"
@ PROW() ,49 SAY Q231d2 PICT "XX"
@ PROW()+1 , 0 SAY " ( ) Construction will be completed in 19"
@ PROW() , 9 SAY Q231e1 PICT "X"
@ PROW() ,49 SAY Q231e2 PICT "XX"
@ PROW()+2 , 0 SAY "2.3.2 Lending Agency: "
@ PROW() ,24 SAY Q232 PICT "XXXXXXXXXX"

```

EJECT

DO HEADER

```

@ PROW()+2 , 0 SAY "3. AREA"
@ PROW()+1 , 0 SAY " Unit: ha"
@ PROW()+1 , 0 SAY "-----"
@ PROW()+1 , 0 SAY " Description Present Plan"
@ PROW()+1 , 0 SAY "-----"
@ PROW()+1 , 0 SAY "3.1 Irrigated Paddy Field "
@ PROW() ,46 SAY " "
@ PROW() ,39 SAY Q31a PICT "999,999"
@ PROW() ,54 SAY Q31b PICT "999,999"
@ PROW()+1 , 0 SAY "3.2 Rainfed Paddy Field "
@ PROW() ,46 SAY " "
@ PROW() ,39 SAY Q32a PICT "999,999"
@ PROW() ,54 SAY Q32b PICT "999,999"
@ PROW()+1 , 0 SAY "3.3 Upland Field "
@ PROW() ,46 SAY " "
@ PROW() ,39 SAY Q33a PICT "999,999"
@ PROW() ,54 SAY Q33b PICT "999,999"
@ PROW()+1 , 0 SAY "3.4 Others "
@ PROW() ,46 SAY " "
@ PROW() ,39 SAY Q34a PICT "999,999"
@ PROW() ,54 SAY Q34b PICT "999,999"
@ PROW()+1 , 0 SAY "3.5 Total "
@ PROW() ,46 SAY " "
@ PROW() ,39 SAY Q35a PICT "999,999"

```

Sample of Computer Program  
Data Storage & Retrieval Sub-system

```
@ PROW() ,54 SAY Q35b PICT "999,999"
@ PROW()+1 , 0 SAY "-----"
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```
@ PROW()+3 , 0 SAY "4. WELL CHARACTERISTICS"
@ PROW()+1 , 0 SAY "-----"
@ PROW()+1 , 0 SAY " Description Number Average Depth"
@ PROW()+1 , 0 SAY "-----"
@ PROW()+1 , 0 SAY "4.1 Shallow (ITTW) "
@ PROW() ,46 SAY " nos "
@ PROW() ,63 SAY " m"
@ PROW() ,39 SAY Q41a PICT "999,999"
@ PROW() ,57 SAY Q41b PICT "999.99"
@ PROW()+1 , 0 SAY "4.2 Deep (DTW) "
@ PROW() ,46 SAY " nos "
@ PROW() ,63 SAY " m"
@ PROW() ,39 SAY Q42a PICT "999,999"
@ PROW() ,57 SAY Q42b PICT "999.99"
@ PROW()+1 , 0 SAY "-----"
```

```
@ PROW()+3 , 0 SAY "5. CONSTRUCTION COST"
@ PROW()+1 , 0 SAY " Unit: Million Rp."
@ PROW()+1 , 0 SAY "-----"
@ PROW()+1 , 0 SAY " Description Construction "
@ PROW()+1 , 0 SAY " Cost "
@ PROW()+1 , 0 SAY "-----"
@ PROW()+1 , 0 SAY "5.1 Well"
@ PROW()+1 , 0 SAY "5.1.1 Shallow Well "
@ PROW() ,39 SAY Q511 PICT "999,999.99"
@ PROW()+1 , 0 SAY "5.1.2 Deep Well "
@ PROW() ,39 SAY Q512 PICT "999,999.99"
@ PROW()+2 , 0 SAY "5.2 Canals "
@ PROW() ,39 SAY Q52 PICT "999,999.99"
@ PROW()+2 , 0 SAY "5.3 Total "
@ PROW() ,39 SAY Q53 PICT "999,999.99"
@ PROW()+1 , 0 SAY "-----"
EJECT
```

RETURN

\* End-of-procedure : MASTER1

\* End-of-file : GPRT.PRG

*Annex J*

*Land Development*





## ANNEX - J

### LAND DEVELOPMENT

#### Contents

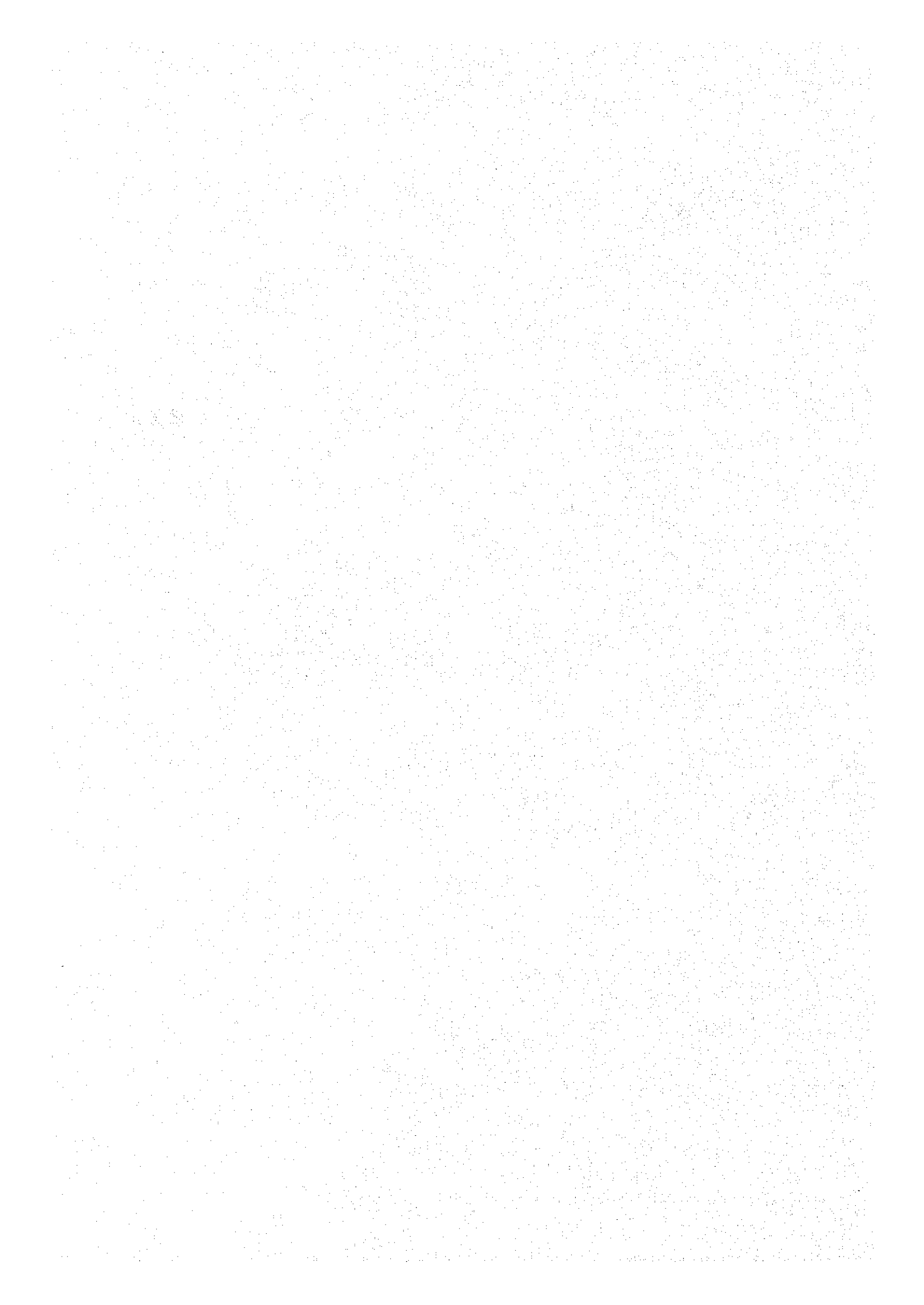
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*Text*



## **1. Past Performance of Land Development**

The land development project initiated in 1979/80 under the Directorate of Land rehabilitation and development (DLRD), Directorate General of food Crops Agriculture (DGFCA), Ministry of Agriculture was a support to farmers through the credit from the Bank Rakyat Indonesia. However, to the target of 700,000 ha for Repelitas III and IV, only about 350,000 ha consisting of 110,000 ha by the Credit and 240,000 ha by farmers themselves, were completed.

Based on the above experiences, a new policy to reach the target of land development, 375,000 ha for the Repelita V was issued in August 1989. The new policy comprises " Assisted Self-help Development System" and " Private Credit Land development System".

In the assisted self-help development system, part of the land development works becomes a contribution by the Government. It includes site selection (Investigation), survey and design, farmers registration, land clearing, land leveling and supervision. The field dikes and field canals are constructed by the farmers themselves.

According to the inventory data in April 1989 of the Directorate of Irrigation I, DGWRD, Ministry of Public Works, about 860,000 ha are estimated as potential areas to be still developed by irrigation out of about 4,820,000 ha of the designed irrigation area handled by the Directorates except the Directorate of Swamp of DGWRD, and out of the above 860,000 ha, it is said that the farm land of about 300,000 ha remains undeveloped notwithstanding that the main systems for irrigation have been completed. To solve this matter, the land development of 375,000 ha including the development in swamp and village irrigation schemes has been a target for Repelita V.

## **2. Performance in Repelita V**

Table 2.1 to Table 2.8 show the yearly target, contracted amount, progress and completed works by farmers themselves in the objective areas of the Central Government (APBN) and the sector program loan from OECF. The land development work is largely divided into the land clearing and land leveling operated by the Government and the paddy field formation consisting of the works for dikes, canals, roads, etc. in field to be principally constructed by farmers. The work is completed after the finishing of paddy field formation. On the other hand, there are the land developed by farmers themselves in the objective area. The real completed work is expressed as the total of the area where the paddy field formation finished and the area developed by farmers themselves.

The following table presents that the target of land development in Repelita V will reach to 437,000 ha and that for Sumatera is the biggest.(see Table 2.9)

Physical Target of Land Development in Repelita V

Province						Unit : ha
	1989/90	1990/91	1991/92	1992/93	1993/94	Total
Sumatera	26,743	49,677	50,358	44,959	22,001	193,738
Jawa	16,326	18,127	9,000	8,370	6,225	58,048
Bali/Nusa Tenggara	3,209	9,317	4,138	2,500	2,600	21,764
Kalimantan	12,001	13,989	16,619	14,866	6,595	64,070
Sulawesi	21,666	22,381	21,943	16,110	6,300	88,400
Maluku/Irian Jaya	1,550	2,316	2,491	2,850	2,140	11,347
<b>INDONESIA</b>	<b>81,494</b>	<b>115,807</b>	<b>104,549</b>	<b>89,655</b>	<b>45,861</b>	<b>437,367</b>

Source : Directorate of Land Rehabilitation & Development , DGFCFA, March 15,1993

Actually, however, the total achievement of land development in Repelita V will be counted to be about 302,000 ha. The actual achievement of land development is estimated at 257,000 ha, about 65 % of the target as of the end of 1992/93, and those in Sumatera and in Jawa are 60 % and 92 % respectively. It shows that the land development in Repelita V becomes the biggest in Sumatera in its amount , but in Jawa in its progress. (see Table 2.10)

Physical Progress of Land Development in Repelita V

Province						Unit : ha
	1989/90	1990/91	1991/92	1992/93	1993/94	Total
Sumatera	27,889	28,612	28,468	18,033	22,001	125,002
Jawa	17,245	15,284	9,503	5,637	6,225	53,894
Bali/Nusa Tenggara	747	6,483	4,379	2,602	2,600	18,771
Kalimantan	8,255	10,684	7,758	5,818	6,595	39,110
Sulawesi	20,458	12,527	16,115	4,715	6,300	60,115
Maluku/Irian Jaya	3,859	770	667	277	2,140	5,753
<b>INDONESIA</b>	<b>78,454</b>	<b>74,359</b>	<b>66,889</b>	<b>37,082</b>	<b>45,861</b>	<b>302,645</b>

Source : Directorate of Land Rehabilitation & Development , DGFCFA, March 15,1993

The land development has been carried out through the Government; budget (APBN) and the program loan from OECF, and by farmers themselves. The following tables show that the physical achievement of land development will be 139,000 ha through APBN, 90,000 ha through the OECF loan and 74,000 ha by farmers.(see Table 2.11 to Table 2.13)

Physical Progress of Land Development by Government' Budget (APBN)

Province	1989/90	1990/91	1991/92	1992/93	1993/94	Unit : ha
	Progress	Progress	Progress	Progress	Target	Total
Sumatera	322	19,092	16,984	7,262	22,001	65,660
Jawa	0	7,523	8,820	2,250	6,225	24,819
Bali/Nusa Tenggara	0	1,382	3,202	853	2,600	8,036
Kalimantan	250	3,918	4,486	2,065	6,595	17,314
Sulawesi	0	2,940	8,494	1,923	6,300	19,658
Maluku/Irian Jaya	0	770	467	277	2,140	3,654
<b>INDONESIA</b>	<b>571</b>	<b>35,626</b>	<b>42,453</b>	<b>14,630</b>	<b>45,861</b>	<b>139,141</b>

Source : Directorate of Land Rehabilitation & Development , DGFC A, March 15,1993

Physical Progress of Land Development by Loan

Province	1989/90	1990/91	1991/92	1992/93	1993/94	Unit : ha
	Progress	Progress	Progress	Target		Total
Sumatera	17,442	5,072	5,767	7,300	n.a.	35,580
Jawa	15,081	4,415	0	0	n.a.	19,496
Bali/Nusa Tenggara	837	2,029	369	500	n.a.	3,736
Kalimantan	4,609	1,757	1,068	3,440	n.a.	10,873
Sulawesi	13,396	2,836	0	2,500	n.a.	18,732
Maluku/Irian Jaya	1,308	0	0	0	n.a.	1,308
<b>INDONESIA</b>	<b>52,673</b>	<b>16,108</b>	<b>7,203</b>	<b>13,740</b>	<b>n.a.</b>	<b>89,725</b>

Source : Directorate of Land Rehabilitation & Development , DGFC A, March 15,1993

Physical Progress of Land Development by Farmers during 1989/90 to 1992/93

Province	1989/90	1990/91	1991/92	1992/93	Unit : ha
					Total
Sumatera	10,125	4,448	5,717	3,470	23,761
Jawa	2,164	3,346	682	3,387	9,579
Bali/Nusa Tenggara	1,870	3,071	809	1,249	6,999
Kalimantan	3,397	5,009	2,205	313	10,923
Sulawesi	7,062	6,751	7,620	293	21,726
Maluku/Irian Jaya	591	0	200	0	791
<b>INDONESIA</b>	<b>25,209</b>	<b>22,625</b>	<b>17,233</b>	<b>8,712</b>	<b>73,779</b>

Source : Directorate of Land Rehabilitation & Development , DGFC A, March 15,1993

Table following tables exhibit the contracted price and physical amount during 1989/1990 to 1991/92. The average unit price during the above period is estimated at 458,000 Rp/ ha. (see Table 2.14 and Table 2.15)

Contract Amount of Land Development during 1989/90 to 1991/92

Province	Million Rp.			
	1989/90	1990/91	1991/92	Total
Sumatera	8,514	17,426	27,254	53,193
Jawa	5,821	4,651	3,572	14,044
Bali/Nusa Tenggara	358	1,086	2,219	3,664
Kalimantan	3,308	4,458	10,439	18,204
Sulawesi	7,977	7,362	9,995	25,334
Maluku/Irian Jaya	611	544	834	1,990
<b>INDONESIA</b>	<b>26,589</b>	<b>35,527</b>	<b>54,313</b>	<b>116,429</b>

Source : Directorate of Land Rehabilitation & Development , DGFC, March 15,1993

Physical Amount of Contract of Land Development during 1989/90 to 1991/92

Province	Unit : ha			
	1989/90	1990/91	1991/92	Total
Sumatera	26,660	37,780	44,639	109,079
Jawa	16,326	11,915	9,000	37,241
Bali/Nusa Tenggara	3,209	4,835	4,130	12,174
Kalimantan	11,834	8,848	15,780	36,462
Sulawesi	21,666	15,880	18,094	55,640
Maluku/Irian Jaya	4,759	1,286	1,057	7,101
<b>INDONESIA</b>	<b>81,244</b>	<b>80,544</b>	<b>92,700</b>	<b>254,488</b>

Source : Directorate of Land Rehabilitation & Development , DGFC, March 15,1993

### 3. Future Necessity of Land Development

There are about 300,000 ha still remained undeveloped in the existing irrigation schemes in accordance with the inventory survey results by JICA, FIDP Team. Moreover, in the future, land development for irrigation sub-sector will be required with the extension program of existing schemes and the program of new irrigation schemes.



## ***Tables***

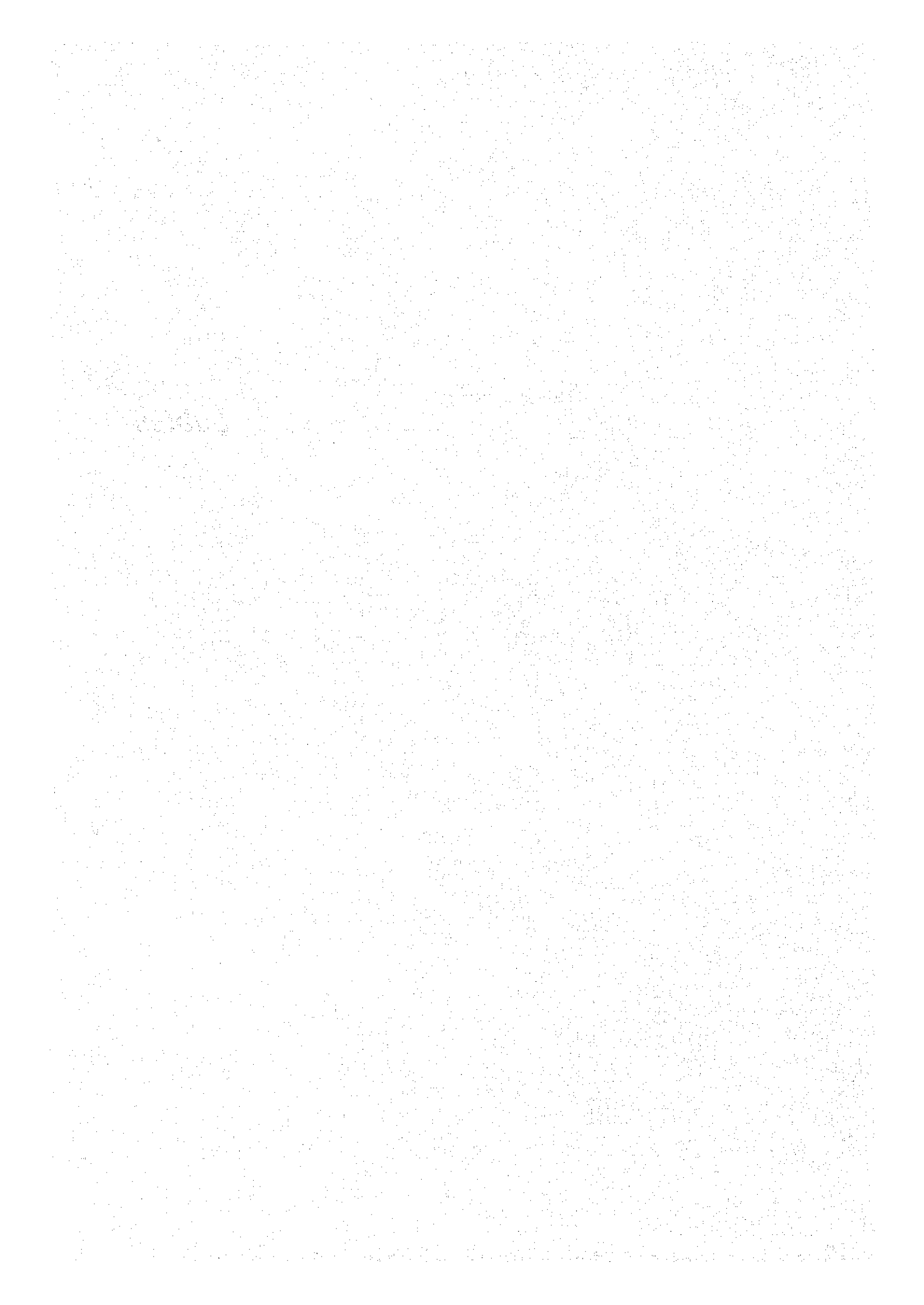


Table 2.1 Progress of land Development by APBN 1989/90

No.	Province	Target										Implementation by APBN										February 1993	
		Physical		Budget		Contract Total		Physical Realization of Column No.5		Budgetary Realization No.6		Not yet Contracted		Sawah Formation		Implementation of Farmers themselves		Total of Achievement					
		(Ha)	(Rp.1000)	(Ha)	(Rp.1000)	Area	Amount	Completed	On-Going	Already Paid	Not yet Paid	Area	Amount	Completed	On-Going	Completed	100%						
3	4	5	6	7	8	9=5-7-8	10	11=6-10	12=3-5	13=4-6	14	15	16	17=14-16									
11	DI.Aceh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
12	Sumatera Utara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
13	Sumatera Barat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
14	Riau	83	25,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
15	Jambi	83	25,000	83	24,710	0	0	0	0	0	83	25,000	0	0	0	0	0	0					
16	Sumatera Selatan	83	25,000	83	24,540	0	0	24,710	0	0	0	291	0	0	0	0	0	0					
17	Bengkulu	0	0	0	0	0	0	24,540	0	0	0	461	0	0	0	0	0	0					
18	Lampung	155	25,000	155	24,950	0	0	24,950	0	0	0	50	0	0	0	0	0	0					
	Sumatera	405	100,000	322	74,199	0	0	74,199	0	0	83	25,801	322	0	0	0	0	5,073					
31	DK.I.Ikarta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
32	Jawa Barat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
33	Jawa Tengah	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
34	DI.Iogyakarta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
35	Jawa Timur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
	Jawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
51	Bali	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
52	NTB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
53	NTT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
54	Timor Timur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
	Bali/Nusa Tenggara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
61	Kalimantan Barat	83	25,000	83	24,885	0	0	24,885	0	0	0	115	0	0	0	0	0	0					
62	Kalimantan Tengah	167	50,000	0	0	0	0	0	0	167	50,000	0	0	0	0	0	0	0					
63	Kalimantan Selatan	167	50,000	167	47,950	0	0	47,950	0	0	0	2,050	167	0	0	0	0	0					
64	Kalimantan Timur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
	Kalimantan	417	125,000	250	72,835	0	0	72,835	0	0	167	52,165	250	0	0	0	0	0					
71	Sulawesi Utara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
72	Sulawesi Tengah	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
73	Sulawesi Selatan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
74	Sulawesi Tenggara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
	Sulawesi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
81	Maluku	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
82	Irian Jaya	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
	Maluku/Irian Jaya	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
INDONESIA		821	225,000	571	147,034	0	0	147,034	0	0	250	77,946	571	0	0	0	0	9,257					

Source: Directorate of Land Rehabilitation & Development, DG/CA, March 15, 1993

February 1993  
**Table 2.2 Progress of land Development by OECF Program Loan 1989/90**

No.	Province	Target				Implementation by Foreign Aid Loan								Sawab Formation			Implementation of Farmers themselves		Total of Achievement
		Physical Budget		Contract Total		Physical Realization of Column No.5		Budgetary Realization No.6		Not yet Contracted		Completed 100%		On-Going		Completed 100%			
		(Ha)	(Rp.1000)	(Ha)	(Rp.1000)	Completed 100%	(Ha)	Not yet Implemented	Already Paid	(Rp.1000)	Not yet Paid	(Ha)	(Rp.1000)	(Ha)	(Rp.1000)	(Ha)	(Rp.1000)	(Ha)	
3	4	5	6	7	8	9-5-7-8	10	11-6-10	12-3-5	13-4-6	14	15	16	17-14+16					
11	D.I.Aceh	4,166	1,848,600	4,166	1,848,129	4,165	0	0	1,826,244	21,884	1	471	4,051	0	0	0	0	0	4,051
12	Sumatera Utara	2,500	1,044,928	2,500	1,017,152	2,870	902	0	520,851	496,301	0	27,776	1,552	0	0	0	0	0	1,552
13	Sumatera Barat	4,157	1,536,350	4,157	1,531,487	2,870	709	0	780,165	780,165	578	4,863	2,784	770	0	0	0	0	2,784
14	Riau	2,000	679,000	2,000	263,149	616	0	0	263,149	0	1,384	415,851	408	208	0	0	0	0	425
15	Jambi	2,141	825,400	2,141	824,680	2,064	77	0	507,974	316,706	0	720	2,064	0	0	0	0	0	3,725
16	Sumatera Selatan	3,600	672,043	3,600	663,023	1,806	60	0	292,716	370,307	1,724	9,020	1,806	0	0	0	0	0	1,806
17	Bengkulu	3,179	1,499,100	3,179	1,407,591	2,722	50	112	1,191,362	216,229	295	91,509	2,337	656	0	0	0	0	2,457
18	Lampung	4,595	1,579,250	4,595	884,280	2,440	0	0	884,280	0	2,155	694,970	2,440	0	0	0	0	0	2,586
	Sumatera	26,338	9,684,671	26,338	8,439,491	18,253	924	1,014	6,266,740	2,201,593	6,147	1,245,180	17,442	1,634	0	0	0	0	5,052
31	D.K.I.Jakarta	10,512	3,828,600	10,512	3,819,622	10,395	0	117	3,805,515	14,107	0	8,978	10,389	0	0	0	0	0	10,389
32	Jawa Barat	1,856	556,800	1,856	541,148	1,192	664	0	347,525	193,623	0	15,652	1,192	0	0	0	0	0	1,348
33	Jawa Tengah	458	157,400	458	136,914	458	0	0	136,914	0	0	486	0	0	0	0	0	0	0
34	D.I.Jogyakarta	3,500	1,325,500	3,500	1,323,000	3,500	0	0	1,323,000	0	0	2,500	3,500	0	0	0	0	0	3,500
35	Jawa Timur	16,326	5,848,300	16,326	5,820,684	15,545	0	781	5,612,955	207,730	0	27,616	15,081	0	0	0	0	0	16,429
51	Bali	150	45,000	150	44,977	102	0	48	26,986	17,991	0	23	102	0	0	0	0	0	80
52	NTB	1,000	312,500	1,000	0	0	0	0	0	0	1,000	312,500	0	0	0	0	0	0	1,043
53	NTT	1,000	355,400	1,000	313,400	973	0	0	313,400	0	27	42,000	735	238	0	0	0	0	735
54	Timor Timur	1,059	423,600	1,059	0	0	0	0	0	0	1,059	423,600	0	0	0	0	0	0	0
	Bali/Nusa Tenggara	3,209	1,136,500	3,209	358,377	1,075	0	48	340,386	17,991	2,086	778,123	837	238	0	0	0	0	1,348
61	Kalimantan Barat	6,400	2,162,500	6,400	1,396,112	2,880	110	0	1,186,497	209,615	3,409	766,388	492	2,461	0	0	0	0	645
62	Kalimantan Tengah	3,183	1,160,600	3,183	1,125,903	3,069	0	0	1,125,903	0	114	34,697	2,619	450	0	0	0	0	2,769
63	Kalimantan Selatan	1,100	495,000	1,100	379,208	800	0	0	379,208	0	300	115,792	800	0	0	0	0	0	1,347
64	Kalimantan Timur	901	362,650	901	333,637	897	0	0	311,869	21,768	4	29,013	697	326	0	0	0	0	404
	Kalimantan	11,584	4,180,750	11,584	3,234,860	7,646	110	0	3,003,477	231,383	3,828	945,890	4,609	3,237	0	0	0	0	7,154
71	Sulawesi Utara	2,662	969,750	2,662	136,234	54	0	263	17,732	118,502	2,345	833,516	0	0	0	0	0	0	693
72	Sulawesi Tengah	8,707	4,172,332	8,707	4,172,332	6,849	1,865	0	2,576,483	1,595,849	0	0	5,381	0	0	0	0	0	1,476
73	Sulawesi Selatan	6,000	1,942,700	6,000	1,942,700	4,758	1,088	153	1,895,213	47,487	0	0	3,884	1,962	0	0	0	0	5,522
74	Sulawesi Tenggara	4,297	1,735,250	4,297	1,725,491	4,214	0	83	1,655,390	70,041	0	9,819	4,130	0	0	0	0	0	1,476
	Sulawesi	21,666	8,820,032	21,666	7,976,697	15,875	2,954	499	6,144,817	1,831,880	2,345	843,335	13,396	1,962	0	0	0	0	5,282
81	Maluku	1,000	411,900	1,000	411,479	1,000	0	0	411,479	0	0	421	1,000	0	0	0	0	0	50
82	Irian Jaya	550	200,000	550	200,000	486	0	65	64,255	135,745	0	0	308	235	0	0	0	0	849
	Maluku/Irian Jaya	1,550	611,900	1,550	611,479	1,486	0	65	475,734	135,745	0	421	1,308	235	0	0	0	0	1,714
	INDONESIA	80,673	30,282,153	80,673	26,441,888	59,879	3,988	2,407	21,844,109	4,626,321	14,406	3,840,565	52,673	7,305	0	0	0	0	15,942

Source: Directorate of Land Rehabilitation & Development, DG/FA, March 15, 1993

Table 2.3 Progress of land Development by APBN 1990/91

No.	Province	Implementation by APBN										Sawah Formation		February 1993		
		Target		Physical Realization of Column No.5		Budgetary Realization No.6		Net yet Contracted		Completed		100%		100%		
		(Ha)	(Rp.1000)	Area	Amount	Completed	On-Going	Already Paid	Not yet Paid	Area	Amount	(Ha)	(Rp.1000)	(Ha)	(Rp.1000)	(Ha)
1	2	3	4	5	6	7	8	9=5-7-8	10	11=6-10	12=3-5	13=4-6	14	15	16	17=14+16
11	D.I.Aceh	6,018	2,592,800	6,018	2,584,738	5,809	209	0	2,552,247	62,491	0	8,062	5,808	0	0	5,808
12	Sumatera Utara	6,250	2,520,000	4,709	1,972,368	1,980	302	2,428	857,714	1,114,655	1,541	547,632	1,852	0	0	1,852
13	Sumatera Barat	6,250	2,465,000	5,403	1,978,014	2,698	2,705	0	920,992	1,057,022	947	486,986	1,734	902	0	1,734
14	Riau	2,950	1,325,000	1,270	587,111	1,270	0	0	587,111	0	1,681	737,890	339	931	0	339
15	Jambi	2,000	941,250	2,000	937,207	1,277	0	723	409,747	527,460	0	4,043	1,025	0	2,507	3,532
16	Sumatera Selatan	3,900	1,710,000	0	0	0	0	0	0	0	3,900	1,710,000	0	0	790	790
17	Bengkulu	5,000	2,297,143	5,000	2,297,143	2,798	0	2,202	1,200,887	1,096,256	0	1	2,336	0	0	2,336
18	Lampung	8,750	3,747,500	5,999	2,299,513	5,999	0	0	2,299,513	0	2,751	1,447,987	5,999	0	1,105	7,103
	Sumatera	41,218	17,598,693	30,398	12,656,093	21,829	3,215	5,353	8,828,210	3,857,883	10,820	4,942,600	19,092	1,833	4,402	23,494
31	D.K.I.Jakarta	7,750	2,879,500	4,218	1,919,217	4,218	0	0	1,919,072	145	3,582	960,283	4,218	0	0	4,218
32	Jawa Barat	2,500	687,500	0	0	0	0	0	0	0	2,500	687,500	0	0	1,878	1,878
33	Jawa Tengah	0	0	0	0	0	0	0	0	0	0	0	55	0	55	110
34	D.I.Jogjakarta	0	0	0	0	0	0	0	0	0	0	0	3,250	0	3,250	3,250
35	Jawa Timur	3,250	1,274,300	3,250	1,267,825	3,250	0	0	1,267,825	0	6,032	1,654,258	7,523	0	1,933	9,456
	Jawa	13,500	4,841,300	7,468	3,187,042	7,468	0	0	3,186,897	145	6,032	1,654,258	7,523	0	1,933	9,456
51	Bali	300	90,000	300	89,914	300	0	0	89,914	0	0	86	300	0	79	379
52	NTB	1,900	815,000	0	0	0	0	0	0	0	1,900	815,000	0	0	1,661	1,661
53	NTT	3,838	1,632,700	2,506	0	2,263	0	242	0	0	1,332	1,632,700	1,082	0	0	1,082
54	Timor Timur	1,250	500,000	0	0	0	0	0	0	0	1,250	500,000	0	0	0	0
	Bali/Nusa Tenggara	7,288	3,037,700	2,806	89,914	2,563	0	242	89,914	0	4,482	2,947,786	1,382	0	1,741	3,123
61	Kalimantan Barat	2,400	1,097,750	468	224,363	191	277	0	104,397	119,966	1,932	873,387	0	0	72	72
62	Kalimantan Tenge	4,600	1,431,275	1,518	610,236	1,518	0	0	593,374	16,863	3,082	821,039	1,075	860	1,448	2,523
63	Kalimantan Selatan	2,350	1,141,000	2,350	1,136,194	2,110	240	0	816,596	319,598	0	4,806	2,110	240	555	2,665
64	Kalimantan Timu	1,800	784,870	1,673	682,252	1,232	0	441	461,640	220,612	127	102,618	733	344	129	862
	Kalimantan	11,150	4,454,895	6,009	2,653,045	5,051	517	441	1,976,007	677,038	5,141	1,801,850	3,918	1,644	2,204	6,122
71	Sulawesi Utara	4,700	2,275,638	1,301	495,010	743	0	559	241,844	253,166	3,399	1,780,628	0	0	16	16
72	Sulawesi Tengah	5,288	2,462,167	5,288	2,458,128	4,092	1,196	0	1,865,726	592,402	0	4,039	0	0	0	0
73	Sulawesi Selatan	2,750	1,290,000	580	216,832	90	85	405	216,832	0	2,170	1,073,168	0	0	3,574	3,574
74	Sulawesi Tenggara	4,600	2,177,500	4,600	2,173,305	4,351	0	249	2,043,681	129,625	0	4,195	2,940	0	3,161	6,102
	Sulawesi	17,338	8,205,305	11,769	5,343,276	9,276	1,281	1,213	4,368,083	973,193	5,569	2,862,029	2,940	0	6,751	9,691
81	Maluku	1,316	570,500	1,286	543,745	1,286	0	31	543,745	0	31	26,755	770	0	0	770
82	Irian Jaya	1,000	375,000	0	0	0	0	0	0	0	1,000	375,000	0	0	0	0
	Maluku/Irian Jaya	2,316	945,500	1,286	543,745	1,286	0	31	543,745	0	1,031	401,755	770	0	0	770
	INDONESIA	92,810	39,083,393	59,736	24,473,114	47,473	5,014	7,280	18,992,855	5,510,259	33,074	14,610,279	35,636	3,477	17,031	52,657

Source : Directorate of Land Rehabilitation & Development, DGRCA, March 15, 1993

Table 2.4 Progress of land development by OECF Program Loan 1990/91

No.	Province	Target		Implementation by Foreign Aid Loan										Sawah Formation		February 1993		Total of Implementation of Farmers themselves Achievement
		Physical (Ha)	Budget (Rp.1000)	Contract Total Area Amount (Ha) (Rp.1000)		Physical Realization of Column No.5 Completed On-Going Not yet 100% (Ha) (Ha) (Ha)		Budgetary Realization No.6 Already Paid Not yet Paid (Rp.1000) (Rp.1000)		Net yet Contracted Area Amount (Ha) (Rp.1000)		Completed On-Going 100% (Ha) (Ha)		Implementation of Farmers themselves Achievement Completed 100% (Ha) (Ha)				
				3	4	5	6	7	8	9-5-7-8	10	11-6-10	12-3-5	13-4-6	14	15	16	
11	D.I.Aceh	2,252	1,326,200	2,252	1,323,857	2,252	0	0	831,040	492,817	0	2,343	2,252	0	0	0	2,252	0
12	Sumatera Utara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Sumatera Barat	1,077	560,280	0	0	0	0	0	0	0	1,077	560,280	0	0	0	0	0	0
14	Riau	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Jambi	696	382,100	696	376,894	220	0	476	1,09,830	267,064	0	5,206	65	31	0	0	65	0
16	Sumatera Selatan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Bengkulu	2,334	1,717,100	2,334	1,713,903	1,624	579	131	350,915	1,362,988	0	3,197	655	969	46	0	701	0
18	Lampung	2,100	1,355,262	2,100	1,355,262	2,100	0	0	1,008,025	347,237	0	0	2,100	0	0	0	2,100	0
	Sumatera	8,459	5,340,942	7,382	4,769,916	6,196	579	607	2,299,810	2,470,106	1,077	571,026	5,072	1,000	46	0	5,118	0
31	D.K.I.Jakarta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Jawa Barat	1,530	459,000	1,530	456,889	1,499	0	31	447,574	9,315	0	2,111	1,499	0	1,358	2,856	0	
33	Jawa Tengah	1,042	312,600	1,042	296,066	1,042	0	0	235,080	60,986	0	16,534	1,041	0	55	1,096	0	
34	D.I.Jogyakarta	2,055	711,500	1,875	711,500	1,875	0	0	711,500	0	180	1,875	1,875	0	0	1,875	0	
35	Jawa Timur	4,627	1,483,100	4,447	1,464,455	4,416	0	31	1,394,154	70,301	180	18,645	4,415	0	1,413	5,827	0	
	Jawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
51	Bali	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	NITB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	NIT	2,029	1,405,850	2,029	996,000	2,029	0	0	996,000	0	0	407,850	2,029	0	1,331	2,029	0	
54	Timor Timur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Bali/Nhssa Tenggara	2,029	1,405,850	2,029	996,000	2,029	0	0	996,000	0	0	407,850	2,029	0	1,331	3,360	0	
61	Kalimantan Barat	536	321,200	536	311,717	536	0	0	311,717	0	0	9,483	500	36	645	1,145	0	
62	Kalimantan Tengah	1,257	893,253	1,257	831,110	1,257	0	0	831,110	0	0	2,143	1,257	0	813	2,070	0	
63	Kalimantan Selatan	1,046	663,000	1,046	662,000	1,046	0	0	346,400	315,600	0	1,000	0	999	1,347	0	0	
64	Kalimantan Timur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Kalimantan	2,839	1,817,453	2,839	1,804,827	2,839	0	0	1,489,227	315,600	0	12,626	1,757	1,055	2,305	4,562	0	
71	Sulawesi Utara	932	476,200	0	0	0	0	0	0	0	932	476,200	0	0	0	0	0	
72	Sulawesi Tengah	2,577	1,235,950	2,577	1,233,199	1,950	0	627	517,788	715,411	0	2,751	1,950	0	0	1,950	0	
73	Sulawesi Selatan	579	326,650	579	325,946	579	0	0	0	325,946	0	704	0	0	0	0	0	
74	Sulawesi Tenggara	955	460,250	955	459,550	886	0	69	416,501	43,049	0	700	886	0	0	886	0	
	Sulawesi	5,043	2,499,050	4,111	2,018,695	3,415	0	696	934,289	1,084,406	932	480,355	2,836	0	0	2,836	0	
81	Maluku	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
82	Irian Jaya	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Maluku/Irian Jaya	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INDONESIA		22,997	12,544,395	20,808	11,053,893	18,895	579	1,334	7,113,480	3,940,413	2,189	1,490,502	16,108	2,055	5,594	21,705	0	

Source: Directorate of Land Rehabilitation & Development, DGFCA, March 15, 1993

Table 2.5 Progress of land Development by APBN 1991/92

No.	Province	Implementation by APBN										Sawah Formation		February 1993		
		Target		Physical Realization of Column No.5		Budgetary Realization No.6		Not yet Contracted		Completed		100%		100%		Total of Achievement
		(Ha)	(Rp.1000)	Area	(Rp.1000)	On-Going	Not yet Implemented	Already Paid	Not yet Paid	Area	Amount	(Ha)	(Rp.1000)	(Ha)	(Rp.1000)	
1	2	3	4	5	6	7	8	9=5-7-8	10	11=6-10	12=3-5	13=4-6	14	15	16	17=14-16
11	D.I.Aceh	3,524	2,792,801	3,524	2,792,801	3,524	0	0	2,792,801	1	0	0	1,118	0	0	1,118
12	Sumatera Utara	4,500	2,604,179	4,500	2,463,020	1,861	0	2,639	1,035,478	1,427,541	0	141,159	1,650	43	3,853	5,503
13	Sumatera Barat	2,323	2,682,750	2,323	2,009,286	841	1,357	125	470,766	1,539,220	0	672,764	268	0	0	268
14	Riau	5,274	3,125,194	5,274	3,010,500	5,274	0	0	3,010,500	0	0	114,694	3,798	1,556	0	3,798
15	Jambi	3,850	2,102,331	3,357	1,854,164	2,288	23	1,047	1,223,966	630,198	493	248,167	1,076	473	1,129	2,205
16	Sumatera Selatan	3,200	2,035,450	3,118	1,868,822	3,118	0	0	1,868,822	0	82	166,628	3,118	0	155	3,273
17	Bengkulu	3,903	2,803,659	3,903	2,649,905	3,911	662	651	446,339	2,203,566	0	153,754	521	2,070	307	828
18	Lampung	6,748	2,812,160	5,470	2,210,427	5,484	0	36	2,184,796	25,631	1,278	601,733	5,484	0	264	5,698
	Sumatera	33,322	20,898,525	31,469	18,799,625	24,930	2,041	4,498	12,973,467	18,799,625	1,853	2,098,900	16,984	4,141	5,707	22,691
31	D.K.I.Jakarta	3,490	1,542,387	3,490	1,472,434	3,490	0	0	1,472,434	0	0	69,953	3,490	0	0	3,490
32	Jawa Barat	2,330	807,345	2,330	761,910	2,330	0	0	761,910	0	0	45,435	2,330	0	67	2,397
33	Jawa Tengah	180	66,990	180	66,297	180	0	0	66,297	0	0	693	0	0	0	0
34	D.I.Jogyakarta	3,000	1,339,800	3,000	1,271,600	3,000	0	0	1,271,600	0	0	68,200	3,000	0	0	3,000
35	Jawa Timur	9,000	3,756,522	9,000	3,572,241	9,000	0	0	3,505,944	66,297	0	184,281	8,820	0	67	8,888
51	Bali	150	52,700	150	50,020	102	0	48	34,114	15,906	0	2,680	102	0	0	102
52	NTB	529	301,500	529	301,500	457	0	72	226,125	75,375	0	0	457	0	809	1,266
53	NTT	1,510	968,550	1,510	828,888	1,510	0	0	828,888	0	0	139,662	1,510	0	0	1,510
54	Timor Timur	1,132	631,442	1,132	598,011	1,132	0	0	598,011	0	0	33,431	1,132	0	0	1,132
	Bali/Nusa Tenggara	3,321	1,954,192	3,341	1,778,419	3,202	0	119	1,687,137	91,281	0	175,773	3,202	0	809	4,010
61	Kalimantan Barat	2,550	1,789,700	2,492	1,709,616	1,390	0	1,102	976,076	733,540	58	80,084	1,246	914	375	1,621
62	Kalimantan Tengah	2,997	2,254,434	2,997	2,254,434	2,997	0	0	2,254,434	0	0	0	2,997	0	1,071	4,068
63	Kalimantan Selatan	5,200	3,420,206	5,200	3,111,720	5,200	0	0	3,057,418	54,301	0	308,486	0	5,159	759	
64	Kalimantan Timur	1,100	822,000	1,100	714,984	1,044	0	56	677,550	37,434	0	107,016	243	857	0	243
	Kalimantan	11,847	8,286,340	11,789	7,790,754	10,631	0	1,158	6,965,478	825,276	58	495,586	4,486	6,930	2,205	6,691
71	Sulawesi Utara	4,250	2,489,998	4,250	1,547,891	2,647	0	1,603	1,269,384	278,507	0	892,047	2,647	77	137	2,784
72	Sulawesi Tengah	4,830	2,972,238	4,381	2,826,909	2,464	0	3,871	1,623,105	1,203,804	469	145,329	634	0	0	634
73	Sulawesi Selatan	1,900	1,160,657	1,900	1,102,409	1,900	0	0	983,502	118,907	0	58,248	952	948	7,483	8,435
74	Sulawesi Tenggara	5,250	3,181,677	5,250	3,019,679	4,261	0	989	2,496,820	522,859	0	161,998	4,261	0	0	4,261
	Sulawesi	16,250	9,754,510	15,781	8,496,888	11,272	0	6,463	6,372,810	2,124,077	469	1,257,622	8,494	1,025	7,620	16,115
81	Maluku	742	506,415	0	0	0	0	0	0	0	742	506,415	0	0	0	0
82	Irian Jaya	518	421,575	518	402,398	518	0	0	402,398	0	0	19,177	467	5	200	667
	Maluku/Irian Jaya	1,260	927,990	518	402,398	518	0	0	402,398	0	742	525,592	467	5	200	667
	INDONESIA	75,000	45,578,079	71,878	40,840,324	59,852	2,041	12,238	31,907,255	21,907,298	3,122	4,737,755	42,459	12,101	16,608	59,061

Source : Directorate of Land Rehabilitation & Development, DofCA, March 15, 1995

Table 2.6 Progress of land development by OECF Program Loan 1991/92

No.	Province	Target		Implementation by Foreign Aid Loan										Sawah Formation			February 1993			
		Budget		Contract Total		Physical Realization of Column No.5		Budgetary Realization No.6		Not yet Contracted		Completed		On-Going		Completed		Implementation of		
		(Ha)	(Rp.1000)	(Ha)	(Rp.1000)	Completed	On-Going	Not yet Implemented	Already Paid	Not yet Paid	Area	Amount	100%	(Ha)	(Ha)	100%	(Ha)	(Ha)	Farmers themselves	Total of Achievement
3	4	5	6	7	8	9=5-7-8	10	11=6-10	12=3-5	13=4-6	14	15	16	17=14-16	18	19	20	21	22	
11	D.I.Aceh	3,398	2,622,556	3,398	2,484,668	1,889	1,509	0	1,235,171	1,199,497	0	187,888	0	1,488	0	1,488	0	0	0	1,488
12	Sumatera Utara	3,080	1,900,000	1,557	1,210,976	660	293	604	239,382	951,594	1,523	689,024	0	0	0	0	0	0	0	10
13	Sumatera Barat	1,507	950,000	1,408	901,145	0	0	1,408	901,145	99	48,855	0	0	0	0	0	0	0	0	0
14	Riau	700	475,000	700	448,141	180	205	315	170,399	272,742	0	31,860	0	80	0	0	0	0	0	0
15	Jambi	758	475,000	0	0	0	0	0	0	758	0	475,000	0	0	0	0	0	0	0	0
16	Sumatera Selatan	638	475,000	638	470,000	539	0	0	0	470,000	0	5,000	0	0	0	0	0	0	0	0
17	Bengkulu	2,513	1,750,000	1,007	689,726	123	884	0	689,726	1,506	1,060,274	0	123	0	0	0	0	0	0	0
18	Lampung	4,462	2,500,000	4,462	2,504,420	4,279	177	6	2,193,427	110,993	0	195,580	0	4,279	177	4,279	0	0	0	4,279
	Sumatera	17,036	11,147,556	13,170	8,454,075	7,670	3,068	2,333	3,858,379	4,595,696	3,866	2,693,481	0	5,767	380	5,777	10	0	0	5,777
31	D.K.I.Jakarta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Jawa Barat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	Jawa Tengah	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	D.I.Jogyakarta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	Jawa Timur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Jawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	Bali	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	NITB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	NTT	817	475,000	809	440,875	369	440	0	440,875	0	8	34,126	0	369	0	369	0	0	0	369
54	Timor Timur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Bali/Nusa Tenggara	817	475,000	809	440,875	369	440	0	440,875	0	8	34,126	0	369	0	369	0	0	0	369
61	Kalimantan Barat	781	475,000	0	0	0	0	0	0	0	781	475,000	0	0	0	0	0	0	0	0
62	Kalimantan Tengah	1,938	1,500,000	1,938	1,330,212	1,068	646	225	596,595	733,617	0	169,788	0	1,068	0	1,068	0	0	0	1,068
63	Kalimantan Selatan	1,445	950,000	1,445	910,000	1,370	0	75	678,113	231,887	0	40,000	0	0	0	0	0	0	0	0
64	Kalimantan Timur	608	475,000	608	407,607	221	387	0	170,998	236,609	0	67,393	0	0	0	0	0	0	0	0
	Kalimantan	4,772	3,400,000	3,991	2,647,819	2,659	1,033	300	1,445,707	1,202,112	781	752,181	0	1,068	0	1,068	0	0	0	1,068
71	Sulawesi Utara	1,279	650,000	0	0	0	0	0	0	0	0	650,000	0	0	0	0	0	0	0	0
72	Sulawesi Tengah	1,852	1,250,000	1,665	1,059,862	0	336	1,329	64,110	995,752	187	190,138	0	0	0	0	0	0	0	0
73	Sulawesi Selatan	648	475,000	648	438,127	210	100	338	0	438,127	0	36,873	0	0	0	0	0	0	0	0
74	Sulawesi Tenggara	1,914	1,250,000	0	0	0	0	0	0	0	1,914	1,250,000	0	0	0	0	0	0	0	0
	Sulawesi	5,693	3,625,000	2,313	1,497,989	210	436	1,667	64,110	1,433,879	3,380	2,127,011	0	0	0	0	0	0	0	0
81	Maluku	593	475,000	539	432,000	0	0	539	0	432,000	54	43,000	0	0	0	0	0	0	0	0
82	Irian Jaya	638	447,828	0	0	0	0	0	0	0	638	447,828	0	0	0	0	0	0	0	0
	Maluku/Irian Jaya	1,231	922,828	539	432,000	0	0	539	0	432,000	692	490,828	0	0	0	0	0	0	0	0
	INDONESIA	29,549	19,570,384	20,822	13,472,758	10,907	4,976	4,839	5,809,070	7,663,688	8,727	6,097,626	7,203	380	625	7,822	0	0	0	7,822

Source: Directorate of Land Rehabilitation & Development, DGFCA, March 15, 1993



Table 2.7 Progress of land Development by APBN 1992/93

No.	Province	Target										Implementation by APBN										February 1993	
		Physical		Budget		Contract Total		Physical Realization of Column No.5		Budgetary Realization No.6		Not yet Contracted		Sawah Formation		Implementation of		Total of					
		(Ha)	(Rp.1000)	(Ha)	(Rp.1000)	Area	Amount	Completed	On-Going	Not yet	Not yet	Area	Amount	Completed	On-Going	Farmers themselves	Achievement						
3	4	5	6	7	8	9=5-7-8	10	11=6-10	12=3-5	13=4-6	14	15	16	17=14+16									
11	D.I.Aceh	4,099	2,954,225	3,564	2,691,750	1,647	1,917	0	1,341,260	1,350,490	595	262,475	1,534	0	0	1,534	0						
12	Sumatera Utara	2,500	1,666,975	2,500	922,111	1,071	322	1,107	413,796	508,315	0	744,864	0	0	2,288	2,288	0						
13	Sumatera Barat	8,019	3,390,445	1,545	344,255	928	74	543	6,670	337,585	6,474	3,046,190	372	55	0	372	0						
14	Riau	4,447	3,272,429	2,464	1,581,920	391	1,501	572	500,328	1,081,592	1,983	1,690,509	0	69	0	69	0						
15	Jambi	3,000	2,081,710	1,275	823,430	448	482	345	0	823,430	1,725	1,258,280	0	0	797	797	0						
16	Sumatera Selatan	4,902	2,900,186	3,300	1,943,124	115	885	0	0	1,943,124	1,602	0	0	0	0	0	0						
17	Bengkulu	3,666	2,826,175	3,651	2,513,903	1,016	2,635	0	0	2,513,903	15	312,273	0	0	0	0	0						
18	Lampung	7,026	5,725,060	7,026	4,547,116	5,357	1,373	296	690,958	3,856,158	0	1,177,944	5,357	920	386	5,743	0						
	Sumatera	37,659	24,817,205	25,324	15,367,608	10,973	9,188	2,863	2,953,013	12,414,596	12,335	8,492,535	7,262	1,045	3,470	10,733	0						
31	D.K.I.Jakarta	3,940	2,006,685	3,766	1,888,809	3,283	0	483	0	1,888,809	174	117,876	0	0	0	0	0						
32	Jawa Barat	2,000	831,600	475	187,247	475	0	0	187,247	0	1,525	644,353	0	0	3,387	3,387	0						
33	Jawa Tengah	180	79,200	180	79,200	180	0	0	0	79,200	0	0	0	0	0	0	0						
34	D.I.Jogjakarta	2,250	1,235,475	2,250	1,170,181	2,250	0	0	0	1,170,181	0	65,294	2,250	0	0	2,250	0						
35	Jawa Timur	8,370	4,152,960	6,671	3,325,457	6,008	0	663	187,247	3,138,190	1,699	827,523	2,250	0	0	3,387	5,637						
51	Bali	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
52	NTB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
53	NTT	2,000	1,397,500	2,000	1,397,500	1,256	0	744	0	1,397,500	0	0	853	0	1,249	1,249	0						
54	Timor Timur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
	Bali/Nusa Tenggara	2,000	1,397,500	2,000	1,397,500	1,256	0	744	0	1,397,500	0	0	853	0	1,249	1,249	0						
61	Kalimantan Barat	3,125	2,285,917	2,185	1,510,801	1,023	1,162	0	693,657	817,144	940	775,116	1,023	0	0	1,023	0						
62	Kalimantan Tengah	2,300	1,759,500	2,300	1,377,359	1,042	1,259	0	188,025	1,189,334	0	382,141	1,042	0	0	1,042	0						
65	Kalimantan Selatan	4,001	2,652,420	4,001	2,592,420	3,400	0	601	2,328,869	263,551	0	60,000	0	0	313	313	0						
64	Kalimantan Timur	2,000	884,268	1,300	884,268	150	1,150	0	137,772	746,496	700	0	0	0	0	0	0						
	Kalimantan	11,426	7,582,105	9,786	6,364,848	5,615	3,570	601	3,348,324	3,016,525	1,640	1,217,257	2,065	0	313	2,378	0						
71	Sulawesi Utara	2,485	1,397,420	833	459,653	660	173	0	301,163	158,490	1,652	937,767	625	0	0	625	0						
72	Sulawesi Tengah	4,150	2,843,004	4,149	2,694,952	1,006	862	2,281	675,269	2,019,683	1	148,052	473	0	0	473	0						
73	Sulawesi Selatan	2,778	2,052,188	2,440	1,358,818	2,196	76	168	842,901	515,917	338	693,370	825	0	0	825	0						
74	Sulawesi Tenggara	4,197	2,953,944	3,650	2,461,435	984	2,666	0	492,387	1,969,048	547	492,509	0	0	293	293	0						
	Sulawesi	13,610	9,246,556	11,072	6,974,858	4,847	3,777	2,448	2,311,721	4,663,137	2,538	2,271,698	1,923	0	293	2,215	0						
81	Maluku	1,100	1,286,000	1,100	1,196,451	31	1,069	0	127,262	1,069,189	0	89,549	0	0	0	0	0						
82	Irian Jaya	1,750	1,237,995	1,263	969,041	377	465	421	0	969,041	487	268,954	277	0	0	277	0						
	Maluku/Irian Jaya	2,850	2,523,995	2,363	2,165,492	409	1,534	421	127,262	2,038,231	487	358,503	277	0	0	277	0						
	INDONESIA	75,915	49,720,321	57,217	35,595,744	29,107	18,069	7,741	8,927,566	26,668,178	18,698	13,167,515	14,630	1,045	8,712	23,342	0						

Source : Directorate of Land Rehabilitation & Development, DGFCA, March 15, 1993

Table 2.8 Targets of OECF Program Loan 1992/93 and APBN 1993/94

No.	Province	1992/93 OECF Loan Target		1993/94 APBN Target	
		Physical	Budget	Physical	Budget
		(Ha)	(RP.1000)	(Ha)	(RP.1000)
11	D.I.Aceh	2,500		3,973	3,178,950
12	Sumatera Utara	500		2,000	1,387,500
13	Sumatera Barat			2,000	1,518,950
14	Riau	500		1,400	1,432,505
15	Jambi			1,980	1,636,848
16	Sumatera Selatan	1,000		3,500	2,287,293
17	Bengkulu			2,500	2,212,500
18	Lampung	2,800		4,648	3,112,365
	Sumatera	7,300		22,001	16,766,911
31	D.K.I.Jakarta				
32	Jawa Barat			2,500	1,410,000
33	Jawa Tengah			1,225	1,368,145
34	D.I.Jogyakarta				
35	Jawa Timur			2,500	1,306,250
	Jawa	0		6,225	4,084,395
51	Bali				
52	NFB			600	360,000
53	NIT			1,000	772,500
54	Timor Timur	500		1,000	702,487
	Bali/Nusa Tenggara	500		2,600	1,834,987
61	Kalimantan Barat			1,095	1,101,728
62	Kalimantan Tengah	1,640		2,500	1,915,000
63	Kalimantan Selatan	1,800		2,000	1,560,000
64	Kalimantan Timur			1,000	760,000
	Kalimantan	3,440		6,595	5,336,728
71	Sulawesi Utara			1,500	910,000
72	Sulawesi Tengah	1,500		1,800	1,960,696
73	Sulawesi Selatan			1,500	1,301,509
74	Sulawesi Tenggara	1,000		1,500	1,301,509
	Sulawesi	2,500		6,300	5,473,714
81	Maluku			1,140	1,857,000
82	Irian Jaya			1,000	982,079
	Maluku/Irian Jaya	0		2,140	2,839,079
	<b>INDONESIA</b>	<b>13,740</b>		<b>45,861</b>	<b>36,335,814</b>

Source : Directorate of Land Rehabilitation & Development , DGFC, March 15,1993.

**Table 2.9 Physical Target of Land Development in Repelita V**

							Unit : ha
No.	Province	1989/90	1990/91	1991/92	1992/93	1993/94	Total
11	D.I.Aceh	4,166	8,270	6,922	6,599	3,973	29,930
12	Sumatera Utara	2,500	6,250	7,580	3,000	2,000	21,330
13	Sumatera Barat	4,157	7,427	3,830	8,019	2,000	25,433
14	Riau	2,083	2,950	5,974	4,947	1,400	17,354
15	Jambi	2,224	2,696	4,588	3,000	1,980	14,488
16	Sumatera Selatan	3,683	3,900	3,838	5,902	3,500	20,823
17	Bengkulu	3,179	7,334	6,416	3,666	2,500	23,095
18	Lampung	4,750	10,850	11,210	9,826	4,648	41,284
	Sumatera	26,743	49,677	50,358	44,959	22,001	193,738
31	D.K.I.Jakarta	0	0	0	0	0	0
32	Jawa Barat	10,512	7,750	3,490	3,940	2,500	28,192
33	Jawa Tengah	1,856	4,030	2,330	2,000	1,225	11,441
34	D.I.Jogyakarta	458	1,042	180	180		1,860
35	Jawa Timur	3,500	5,305	3,000	2,250	2,500	16,555
	Jawa	16,326	18,127	9,000	8,370	6,225	58,048
51	Bali	150	300	150	0		600
52	NTB	1,000	1,900	529	0	600	4,029
53	NTT	1,000	5,867	2,327	2,000	1,000	12,194
54	Timor Timur	1,059	1,250	1,132	500	1,000	4,941
	Bali/Nusa Tenggara	3,209	9,317	4,138	2,500	2,600	21,764
61	Kalimantan Barat	6,483	2,936	3,331	3,125	1,095	16,970
62	Kalimantan Tengah	3,350	5,857	4,935	3,940	2,500	20,582
63	Kalimantan Selatan	1,267	3,396	6,645	5,801	2,000	19,109
64	Kalimantan Timur	901	1,800	1,708	2,000	1,000	7,409
	Kalimantan	12,001	13,989	16,619	14,866	6,595	64,070
71	Sulawesi Utara	2,662	5,632	5,529	2,485	1,500	17,808
72	Sulawesi Tengah	8,707	7,865	6,702	5,650	1,800	30,724
73	Sulawesi Selatan	6,000	3,329	2,548	2,778	1,500	16,155
74	Sulawesi Tenggara	4,297	5,555	7,164	5,197	1,500	23,713
	Sulawesi	21,666	22,381	21,943	16,110	6,300	88,400
81	Maluku	1,000	1,316	1,335	1,100	1,140	5,891
82	Irian Jaya	550	1,000	1,156	1,750	1,000	5,456
	Maluku/Irian Jaya	1,550	2,316	2,491	2,850	2,140	11,347
<b>INDONESIA</b>		<b>81,494</b>	<b>115,807</b>	<b>104,549</b>	<b>89,655</b>	<b>45,861</b>	<b>437,367</b>

Source : Directorate of Land Rehabilitation &amp; Development , DGFC, March 15, 1993

**Table 2.10 Physical Progress of Land Development in Repelita V**

Unit : ha

No.	Province	1989/90	1990/91	1991/92	1992/93	1993/94	Total
11	D.I.Aceh	4,051	8,060	2,606	4,034	3,973	22,723
12	Sumatera Utara	2,892	1,852	5,513	2,788	2,000	15,045
13	Sumatera Barat	3,454	1,734	268	372	2,000	7,827
14	Riau	423	339	3,798	500	1,400	6,460
15	Jambi	4,749	3,597	2,205	797	1,980	13,328
16	Sumatera Selatan	4,605	790	3,273	1,000	3,500	13,169
17	Bengkulu	2,533	3,037	828	0	2,500	8,897
18	Lampung	5,181	9,203	9,976	8,543	4,648	37,552
	Sumatera	27,889	28,612	28,468	18,033	22,001	125,002
31	D.K.I.Jakarta	0	0	0	0	0	0
32	Jawa Barat	10,716	4,218	3,490	0	2,500	20,925
33	Jawa Tengah	2,620	4,734	3,012	3,387	1,225	14,979
34	D.I.Jogyakarta	55	1,206	0	0	0	1,261
35	Jawa Timur	3,854	5,125	3,000	2,250	2,500	16,729
	Jawa	17,245	15,284	9,503	5,637	6,225	53,894
51	Bali	262	379	102	0	0	744
52	NTB	1,710	2,992	1,266	1,249	600	7,816
53	NTT	735	3,111	1,879	853	1,000	7,578
54	Timor Timur	0	0	1,132	500	1,000	2,632
	Bali/Nusa Tenggara	747	6,483	4,379	2,602	2,600	18,771
61	Kalimantan Barat	1,221	1,217	1,621	1,023	1,095	6,177
62	Kalimantan Tengah	2,919	4,593	5,136	2,682	2,500	17,829
63	Kalimantan Selatan	2,652	4,012	759	2,113	2,000	11,535
64	Kalimantan Timur	1,464	862	243	0	1,000	3,569
	Kalimantan	8,255	10,684	7,758	5,818	6,595	39,110
71	Sulawesi Utara	1,114	16	2,784	625	1,500	6,040
72	Sulawesi Tengah	8,216	1,950	634	1,973	1,800	14,573
73	Sulawesi Selatan	5,522	3,574	8,435	825	1,500	19,856
74	Sulawesi Tenggara	5,606	6,988	4,261	1,293	1,500	19,647
	Sulawsi	20,458	12,527	16,115	4,715	6,300	60,115
81	Maluku	1,050	770	0	0	1,140	2,960
82	Irian Jaya	849	0	667	277	1,000	2,793
	Maluku/Irian Jaya	3,859	770	667	277	2,140	5,753
	<b>INDONESIA</b>	<b>78,454</b>	<b>74,359</b>	<b>66,889</b>	<b>37,082</b>	<b>45,861</b>	<b>302,645</b>

Source : Directorate of Land Rehabilitation & Development , DGFCA, March 15,1993

**Table 2.11 Physical Progress of Land Development by Government' Budget (APBN) in Repelita V**

No.	Province	Unit : ha					Total
		1989/90 Progress	1990/91 Progress	1991/92 Progress	1992/93 Progress	1993/94 Target	
11	D.I.Aceh	0	5,808	1,118	1,534	3,973	12,433
12	Sumatera Utara	0	1,852	1,650	0	2,000	5,502
13	Sumatera Barat	0	1,734	268	372	2,000	4,373
14	Riau	0	339	3,798	0	1,400	5,537
15	Jambi	83	1,025	1,076	0	1,980	4,165
16	Sumatera Selatan	83	0	3,118	0	3,500	6,701
17	Bengkulu	0	2,336	521	0	2,500	5,357
18	Lampung	155	5,999	5,434	5,357	4,648	21,592
	Sumatera	322	19,092	16,984	7,262	22,001	65,660
31	D.K.I.Jakarta						
32	Jawa Barat	0	4,218	3,490	0	2,500	10,209
33	Jawa Tengah	0	0	2,330	0	1,225	3,555
34	D.I.Jogyakarta	0	55	0	0		55
35	Jawa Timur	0	3,250	3,000	2,250	2,500	11,000
	Jawa	0	7,523	8,820	2,250	6,225	24,819
51	Bali	0	300	102	0		
52	NTB	0	0	457	0	600	1,057
53	NTT	0	1,082	1,510	853	1,000	4,445
54	Timor Timur	0	0	1,132	0	1,000	2,132
	Bali/Nusa Tenggara	0	1,382	3,202	853	2,600	8,036
61	Kalimantan Barat	83	0	1,246	1,023	1,095	3,448
62	Kalimantan Tengah	0	1,075	2,997	1,042	2,500	7,614
63	Kalimantan Selatan	167	2,110	0	0	2,000	4,277
64	Kalimantan Timur	0	733	243	0	1,000	1,976
	Kalimantan	250	3,918	4,486	2,065	6,595	17,314
71	Sulawesi Utara	0	0	2,647	625	1,500	4,772
72	Sulawesi Tengah	0	0	634	473	1,800	2,907
73	Sulawesi Selatan	0	0	952	825	1,500	3,277
74	Sulawesi Tenggara	0	2,940	4,261	0	1,500	8,701
	Sulawesi	0	2,940	8,494	1,923	6,300	19,658
							0
81	Maluku	0	770	0	0	1,140	1,910
82	Irian Jaya	0	0	467	277	1,000	1,744
	Maluku/Irian Jaya	0	770	467	277	2,140	3,654
<b>INDONESIA</b>		<b>571</b>	<b>35,626</b>	<b>42,453</b>	<b>14,630</b>	<b>45,861</b>	<b>139,141</b>

Source : Directorate of Land Rehabilitation & Development , DGH/CA, March 15, 1993

**Table 2.12 Physical Progress of Land Development by Loan**

No.	Province						Unit : ha
		1989/90 Progress	1990/91 Progress	1991/92 Progress	1992/93 Target	1993/94	Total
11	D.I.Aceh	4,051	2,252	1,488	2,500	n.a.	10,291
12	Sumatera Utara	1,552	0	0	500	n.a.	2,052
13	Sumatera Barat	2,784	0	0		n.a.	2,784
14	Riau	408	0	0	500	n.a.	908
15	Jambi	2,064	65	0		n.a.	2,129
16	Sumatera Selatan	1,806	0	0	1,000	n.a.	2,806
17	Bengkulu	2,337	655	0		n.a.	2,992
18	Lampung	2,440	2,100	4,279	2,800	n.a.	11,619
	Sumatera	17,442	5,072	5,767	7,300	n.a.	35,580
31	D.K.I.Jakarta						
32	Jawa Barat	10,389	0	0		n.a.	10,389
33	Jawa Tengah	1,192	1,499	0		n.a.	2,691
34	D.I.Jogyakarta	0	1,041	0		n.a.	1,041
35	Jawa Timur	3,500	1,875	0		n.a.	5,375
	Jawa	15,081	4,415	0	0	n.a.	19,496
51	Bali	102	0	0			
52	NTB	0	0	0		n.a.	0
53	NTT	735	2,029	369		n.a.	3,133
54	Timor Timur	0	0	0	500	n.a.	500
	Bali/Nusa Tenggara	837	2,029	369	500	n.a.	3,736
61	Kalimantan Barat	492	500	0		n.a.	992
62	Kalimantan Tengah	2,619	1,257	1,068	1,640	n.a.	6,584
63	Kalimantan Selatan	800	0	0	1,800	n.a.	2,600
64	Kalimantan Timur	697	0	0		n.a.	697
	Kalimantan	4,609	1,757	1,068	3,440	n.a.	10,873
71	Sulawesi Utara	0	0	0		n.a.	0
72	Sulawesi Tengah	5,381	1,950	0	1,500	n.a.	8,831
73	Sulawesi Selatan	3,884	0	0		n.a.	3,884
74	Sulawesi Tenggara	4,130	886	0	1,000	n.a.	6,016
	Sulawesi	13,396	2,836	0	2,500	n.a.	18,732
81	Maluku	1,000	0	0		n.a.	1,000
82	Irian Jaya	308	0	0		n.a.	308
	Maluku/Irian Jaya	1,308	0	0	0	n.a.	1,308
<b>INDONESIA</b>		<b>52,673</b>	<b>16,108</b>	<b>7,203</b>	<b>13,740</b>	<b>n.a.</b>	<b>89,725</b>

Source : Directorate of Land Rehabilitation & Development , DGFCFA, March 15,1993

Table 2.13 Physical Progress of Land Development by Farmers during 1989/90 to 1992/93

Cord	Province	Unit : ha					Total
		1989/90 Progress	1990/91 Progress	1991/92 Progress	1992/93 Target	1993/94 Target	
11	D.I.Aceh	0	0	0	0	n.a.	0
12	Sumatera Utara	1,340	0	3,863	2,288	n.a.	7,490
13	Sumatera Barat	670	0	0	0	n.a.	670
14	Riau	15	0	0	0	n.a.	15
15	Jambi	2,602	2,507	1,129	797	n.a.	7,035
16	Sumatera Selatan	2,716	790	155	0	n.a.	3,662
17	Bengkulu	196	46	307	0	n.a.	549
18	Lampung	2,586	1,105	264	386	n.a.	4,341
	Sumatera	10,125	4,448	5,717	3,470	n.a.	23,761
31	D.K.I.Jakarta	0	0	0	0	n.a.	0
32	Jawa Barat	327	0	0	0	n.a.	327
33	Jawa Tengah	1,428	3,236	682	3,387	n.a.	8,733
34	D.I.Jogyakarta	55	110	0	0	n.a.	165
35	Jawa Timur	354	0	0	0	n.a.	354
	Jawa	2,164	3,346	682	3,387	n.a.	9,579
51	Bali	160	79	0	0	n.a.	239
52	NTB	1,710	2,992	809	1,249	n.a.	6,759
53	NTT	0	0	0	0	n.a.	0
54	Timor Timur	0	0	0	0	n.a.	0
	Bali/Nusa Tenggara	1,870	3,071	809	1,249	n.a.	6,999
61	Kalimantan Barat	645	717	375	0	n.a.	1,737
62	Kalimantan Tenga	300	2,261	1,071	0	n.a.	3,632
63	Kalimantan Selata	1,685	1,902	759	313	n.a.	4,659
64	Kalimantan Timur	767	129	0	0	n.a.	896
	Kalimantan	3,397	5,009	2,205	313	n.a.	10,923
71	Sulawesi Utara	1,114	16	137	0	n.a.	1,268
72	Sulawesi Tengah	2,835	0	0	0	n.a.	2,835
73	Sulawesi Selatan	1,637	3,574	7,483	0	n.a.	12,694
74	Sulawesi Tenggara	1,476	3,161	0	293	n.a.	4,930
	Sulawesi	7,062	6,751	7,620	293	n.a.	21,726
81	Maluku	50	0	0	0	n.a.	50
82	Irian Jaya	541	0	200	0	n.a.	741
	Maluku/Irian Jaya	591	0	200	0	n.a.	791
INDONESIA		25,209	22,625	17,233	8,712	n.a.	73,779

Source : Directorate of Land Rehabilitation & Development , DG/FCA, March 15,1993

Table 2.14 Contract Amount for Land Development during 1989/90 to 1991/92

Unit : Million Rupiah

No.	Province	1989/90		1990/91		1991/92		Total	
		APBD	Loan	APBD	Loan	APBD	Loan	APBD	Loan
11	D.I.Aceh	0	1,848	2,585	1,324	2,733	2,435	5,318	5,607
12	Sumatera Utara	0	1,017	1,972	0	2,463	1,211	4,435	2,228
13	Sumatera Barat	0	1,531	1,978	0	2,010	901	3,988	2,433
14	Riau	0	263	587	0	3,011	443	3,598	706
15	Jambi	25	825	937	377	1,854	0	2,816	1,202
16	Sumatera Selatan	25	663	0	0	1,869	470	1,893	1,133
17	Bengkulu	0	1,408	2,297	1,714	2,650	690	4,947	3,811
18	Lampung	25	884	2,300	1,355	2,210	2,304	4,535	4,544
	Sumatera	74	8,439	12,656	4,770	18,800	8,454	31,530	21,663
31	D.K.I.Jakarta	0	0	0	0	0	0	0	0
32	Jawa Barat	0	3,820	1,919	0	1,472	0	3,392	3,820
33	Jawa Tengah	0	541	0	457	762	0	762	998
34	D.I.Jogyakarta	0	137	0	296	66	0	66	433
35	Jawa Timur	0	1,323	1,268	712	1,272	0	2,539	2,035
	Jawa	0	5,821	3,187	1,464	3,572	0	6,789	7,285
51	Bali	0	45	90	0	50	0	140	45
52	NTB	0	0	0	0	302	0	302	0
53	NTT	0	313	0	996	829	441	829	1,750
54	Timor Timur	0	0	0	0	598	0	598	0
	Bali/Nusa Tenggara	0	358	90	996	1,778	441	1,868	1,795
61	Kalimantan Barat	25	1,396	224	312	1,710	0	1,959	1,708
62	Kalimantan Tengah	0	1,126	610	831	2,254	1,350	2,865	3,287
63	Kalimantan Selatan	48	379	1,136	662	3,112	910	4,296	1,951
64	Kalimantan Timur	0	394	682	0	715	408	1,397	741
	Kalimantan	73	3,235	2,633	1,805	7,791	2,648	10,517	7,688
71	Sulawesi Utara	0	136	495	0	1,548	0	2,043	136
72	Sulawesi Tengah	0	4,172	2,458	1,233	2,827	1,060	5,285	6,465
73	Sulawesi Selatan	0	1,943	217	326	1,102	438	1,319	2,707
74	Sulawesi Tenggara	0	1,725	2,173	460	3,020	0	5,193	2,185
	Sulawesi	0	7,977	5,343	2,019	8,497	1,498	13,840	11,493
81	Maluku	0	411	544	0	0	432	544	843
82	Irian Jaya	0	200	0	0	402	0	402	200
	Maluku/Irian Jaya	0	611	544	0	402	432	946	1,043
	INDONESIA	147	26,442	24,473	11,054	40,840	13,473	65,460	50,968
									116,429

Source : Directorate of Land Rehabilitation & Development, DGPCA, March 15, 1995



Table 2.15 Physical Amount of Contract for Land Development during 1989/90 to 1991/92

Unit : ha

No.	Province	1989/90		1990/91		1991/92		Total	
		AFBD	Loan	AFBD	Loan	AFBD	Loan	AFBD	Loan
11	D.I.Aceh	0	4,166	6,018	2,252	3,524	3,398	9,542	9,816
12	Sumatera Utara	0	2,500	4,709	0	4,500	1,557	9,209	4,057
13	Sumatera Barat	0	4,157	5,403	0	2,323	1,408	7,726	5,565
14	Riau	0	2,000	1,270	0	5,274	700	6,544	2,700
15	Jambi	83	2,141	2,000	696	3,357	0	5,441	2,837
16	Sumatera Selatan	83	3,600	0	0	3,118	638	3,201	4,238
17	Bengkulu	0	3,179	5,000	2,354	3,903	1,007	8,903	6,520
18	Lampung	155	4,595	5,999	2,100	5,470	4,462	11,624	11,157
	Sumatera	322	26,338	30,398	7,382	31,469	13,170	62,189	46,890
31	D.K.I.Jakarta	0	10,512	4,218	0	3,490	0	7,708	10,512
32	Jawa Barat	0	1,856	0	1,530	2,330	0	2,330	3,386
33	Jawa Tengah	0	458	0	1,042	180	0	180	1,500
34	D.I.Jogyakarta	0	3,500	3,250	1,875	3,000	0	6,250	5,375
35	Jawa Timur	0	16,326	7,468	4,447	9,000	0	16,468	20,773
51	Bali	0	150	300	0	150	0	450	150
52	NTB	0	1,000	0	0	529	0	529	1,000
53	NTT	0	1,000	2,506	2,029	1,510	809	4,016	3,858
54	Timor Timur	0	1,059	0	0	1,132	0	1,132	1,059
	Bali/Nusa Tenggara	0	3,209	2,806	2,029	3,321	809	6,127	6,047
61	Kalimantan Barat	83	6,400	468	536	2,492	0	3,043	6,956
62	Kalimantan Tengah	0	3,183	1,518	1,257	2,997	1,938	4,515	6,378
63	Kalimantan Selatan	167	1,100	2,350	1,046	5,200	1,445	7,717	3,591
64	Kalimantan Timur	0	901	1,673	0	1,100	608	2,773	1,509
	Kalimantan	250	11,584	6,009	2,839	11,789	3,991	18,048	18,414
71	Sulawesi Utara	0	2,662	1,301	0	4,250	0	5,551	2,662
72	Sulawesi Tengah	0	8,707	5,288	2,577	4,381	1,665	9,669	12,949
73	Sulawesi Selatan	0	6,000	580	579	1,900	648	2,480	7,227
74	Sulawesi Tenggara	0	4,297	4,600	955	5,250	0	9,850	5,252
	Sulawesi	0	21,666	11,769	4,111	15,781	2,313	27,550	28,090
81	Maluku	0	1,000	1,286	0	0	539	1,286	1,539
82	Irian Jaya	0	550	0	0	518	0	518	550
	Maluku/Irian Jaya	0	4,759	1,286	0	518	539	1,803	5,298
INDONESIA		571	80,673	59,736	20,808	71,878	20,822	132,185	122,303

Source : Directorate of Land Rehabilitation & Development, DGFCA, March 15, 1993





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