## Table 2.7-13 Wat Chre Rehabilitation Project

### (1) Project description:

| Item | Description |
|---|---|
| 1.1 Location | District: BaKan; Commune: BoeungKhnar; Village: WatChre; UTM Reference: 361652 / 1398459 |
| 1.2 River basin | Pursat river basin/<br>BoeungKhnar Stream/Chambot river from DamNakAmpil weir |
| 1.3 Target group | 1) Number of household= 926 (Wet season medium- paddy)<br>2) Staff of PDOWRAM and PDA |
| 1.4 Objective of the project | Enhancement of rice production through re-construction of Wat Chre weir and rehabilitation of existing irrigation system |
| 1.5 Type of project | Rehabilitation of existing irrigation system |
| 1.6 Objective area | 1,000Ha |
| 1.7 Necessity of project | In the late 1970's, system construction was completed, and the system lost the function after 2 years' operation. The system problem would be a lack of stable water source and deterioration of irrigation facilities.<br>The water source problem could be mitigated by receiving water supply from the Damnak Ampil extension project in future stage.<br>In order to utilize the water source effectively, re-construction of weir and rehabilitation of canal network would be required. |

### (2) Agriculture

**Present/Without-project & With-project Land Use of the Project Area**

| Land Use Sub-category | I. Present Area (ha) | I. Present Area (%) | II. With Project Area (ha) | II. With Project Area (%) | Increment (II - I) Area (ha) |
|---|---|---|---|---|---|
| 1. Irrigation Area | 1,000 | 85 | 1,000 | 85 | 0 |
| Normal Irrigation Paddy Field | 20 | 2 | 1,000 | 85 | 980 |
| Supplemental Irrigation Paddy Field | 98 | 8 | | | -98 |
| Field under Rainfed Condition | 882 | 75 | | | -882 |
| 2. Rainfed Paddy Field | | | | | |
| 3. Right-of-ways | 180 | 15 | 180 | 15 | 0 |
| Total | 1,180 | 100 | 1,180 | 100 | 0 |

**Agricultural Support Programs Planned**

- Field Programs
  - Field Adaptability Test
  - Demonstration plot, Seed Multiplication etc.
- Farmer/Farmer group Training Programs
  - Training Course, FFS/IPM
  - Study Tour, VEA Training
- Mass guidance/Workshop
- Support Fund for Extension Staff
- Provision of Transportation Means

**Present/Without-project & With-project Crop Production in the Project Area**

| | Land Use Sub-category/ Crops | Present/Without-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | With-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | Increment Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Production (ton) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Normal Irrigation Field | 20 | | | | | 1,000 | | | | | 980 | | | |
| | Early Wet/Dry Season | | 20 | 2 | 3.0 | 60 | | 70 | 7 | 3.5 | 245 | | 50 | | 185 |
| | Wet Season Rice | | 20 | 2 | 2.8 | 55 | | 1,000 | 100 | 3.3 | 3,339 | | 980 | | 3,284 |
| | Upland Crops | | | | | | | 40 | 4.0 | 0.5 | 20 | | 40 | | 20 |
| | Supplemental Irri. Field | 98 | | | | | | | | | | -98 | | | |
| | Dry Season | | | | | | | | | | | | | | |
| | Wet Season Rice | | 98 | 10 | 1.9 | 184 | | | | | | | -98 | | -184 |
| | Rainfed Paddy Field | 882 | | | | | | | | | | -882 | | | |
| | Wet Season Rice | | 882 | 88 | 1.4 | 1,222 | | | | | | | -882 | | -1,222 |
| Annual | **Annual Rice** | | **1,020** | **102** | **1.5** | **1,521** | | **1,070** | **107** | **3.3** | **3,584** | | 50 | 5 | **2,063** |
| Annual | Upland Crops | | | | | | | 40 | 4 | | 20 | | 40 | - | 20 |
| Annual | **Total** | **1,000** | **1,020** | **102** | **1.5** | **1,521** | **1,000** | **1,110** | **111** | | **3,604** | **0** | **90** | **9** | **2,083** |

**Note: Direct sowing & transplanting combined in wet season rice & yield is a weighted average of the two**

Wat Chre

**As shown in the tables; overall yield increase of 1.8 ton/ha and paddy production increase of 2,100ton are expected under the project.**

**(3) Project scope:**

| Item | Description |
|---|---|
| 1. Direct Construction | |
| 1.1 Wat Chre weir | Total width =28m, Weir body = 22m, Height =3.5m<br>Gate: Automatic gate 2 nos. (W 5.5m x H 2.0m )<br>Slide gate 2 nos. ( W 2.0 m x H 2.0 m ) |
| - Intake Structure | 1 nos. Slide gate 3 nos. ( W 2.0 m x H 2.0 m ) |
| 1.2 Canal work | |
| - Canal rehabilitation* | Main = 3.5 km , Secondary = 9 km, |
| - Canal construction* | Main = 1.5 km, Secondary = 1.5 km, Tertiary = 20 km |
| ( *; including structures) | Drainage = 15 km |
| 2. Other Components | |
| 2.1 FWUC level training | Training by FWUC support team through PDOWRAM and MOWRAM |
| 2.2 Agricultural support services | Field extension & training program by PDA/MAFF |

**(4) Implementation Schedule**

(a) Survey, investigation, design, and tender; 12 months, (Tender; 3 months)
(c) Construction; 1 year
(d) Establishment of FWUC and training; 5 years (2 years for establishment, 3 years for training)
(e) Agriculture extension service; 4 years

**(5) Cost Estimate** Total Investment Costs: 2,800 (1,000USD)

| Project Name | Total Construction Costs | Other Costs | | | Total Investment Costs |
|---|---|---|---|---|---|
| | | FWUC level training & mobilization | Agricultural & other support | Land Acquisition Cost | |
| | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) |
| Wat Chre Rehab. Project | 2,604 | 104 | 14 | 78 | 2,800 |

**(6) Evaluation**

| No. | Criteria | Full point | Point obtained |
|---|---|---|---|
| 1. | Resources factor | 30 | 23 |
| 2. | Economic factor | 20 | 12 |
| 3. | Social factor | 20 | 8 |
| 4. | Environmental factor | 10 | 10 |
| 5. | Ease of implementation | 10 | 6 |
| 6. | Maturity factor | 10 | 10 |
| | Total | 100 | 69.00 |

## Table 2.7-14 Anlong Khouch, Wat Leap, Kosh Khsach Water Harvesting and Recession Rice Rehabilitation Project

### (1) Project description:

| Item | Description | | | | |
|---|---|---|---|---|---|
| 1.1 Location | District | Commune | Village | UTM Reference | |
| | BaKan | O Taporng, MeTeuk | Sras Mkak, Me Teuk, Kosh Khsach | 359818 | 1405630 |
| 1.2 River basin | Pursat river basin/ O Taporng Stream/BoeungKhnar Stream | | | | |
| 1.3 Target group | 1) Number of household=1,394 (Wet season medium- paddy)<br>2) Staff of PDOWRAM and PDA | | | | |
| 1.4 Objective of the project | Enhancement of rice production through rehabilitation of existing irrigation system | | | | |
| 1.5 Type of project | Rehabilitation of existing irrigation system | | | | |
| 1.6 Objective area | 2,600 Ha | | | | |
| 1.7 Necessity of project | The project comprises three typical water harvesting and recession rice systems. The Anlong Khouch and the Koah Khsach systems were constructed in the late 1970's. On the other hand, the Wat Leap ssytstem construction was completed in 1994. Among three systems, deterioration of the Anlong Khouch is serious and requires total rehabilitation. The other two projects require partial rehabilitation of dyke system and comprehensive rehabilitation of canal systems. | | | | |

### (2) Agriculture

**Present/Without-project & With-project Land Use of the Project Area**

| Land Use Sub-category | I. Present Area (ha) | I. Present Area (%) | II. With Project Area (ha) | II. With Project Area (%) | Increment (II - I) Area (ha) |
|---|---|---|---|---|---|
| 1. Irrigation Area | 2,514 | 82 | 2,602 | 85 | 88 |
| Normal Irrigation Paddy Field | | | 1,231 | 40 | 1,231 |
| Supplemental Irrigation Paddy Field | 226 | 7 | | | -226 |
| Field under Rainfed Condition | 917 | 30 | | | -917 |
| Recession Paddy Field | 1,371 | 55 | 1,371 | 45 | 0 |
| 2. Rainfed Paddy Field | 100 | 3 | | | -100 |
| 3. Right-of-ways | 446 | 15 | 458 | 15 | 12 |
| Total | 3,060 | 100 | 3,060 | 100 | 0 |

**Agricultural Support Programs Planned**

- Field Programs
  - Field Adaptability Test
  - Demonstration plot, Seed Multiplication etc.
- Farmer/Farmer group Training Programs
  - Training Course, FFS/IPM
  - Study Tour, VEA Training
- Mass guidance/Workshop
- Support Fund for Extension Staff
- Provision of Transportation Means

**Present/Without-project & With-project Crop Production in the Project Area**

| | Land Use Sub-category/ Crops | Present/Without-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | With-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | Increment Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Production (ton) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Normal Irrigation Field | | | | | | 1,231 | | | | | 1,231 | | | |
| | Early Wet/Dry Season | | | | | | | 324 | 12 | 3.5 | 1,134 | | 324 | | 1,134 |
| | Wet Season Rice | | | | | | | 1,231 | 47 | 3.3 | 4,111 | | 1,231 | | 4,111 |
| | Upland Crops | | | | | | | 147 | 5.6 | 0.6 | 93 | | 147 | | 93 |
| | Supplemental Irri. Field | 226 | | | | | | | | | | -226 | | | |
| | Dry Season | | 72 | 3 | 2.5 | 180 | | | | | | | -72 | | -180 |
| | Wet Season Rice | | 226 | 9 | 1.9 | 426 | | | | | | | -226 | | -426 |
| | Rainfed Paddy Field | 1,017 | | | | | | | | | | -1,017 | | | |
| | Dry Season | | 103 | 4 | 2.0 | 206 | | | | | | | -103 | | -206 |
| | Wet Season Rice | | 1,017 | 39 | 1.4 | 1,409 | | | | | | | -1,017 | | -1,409 |
| | Recession Paddy Field | 1,371 | 1,371 | 52 | 2.0 | 2,742 | 1,371 | 1,371 | 52.7 | 2.5 | 3,428 | 0 | 0 | | 686 |
| Annual | **Annual Rice** | | **2,789** | **107** | **1.8** | **4,963** | | **2,926** | **112** | **3.0** | **8,673** | | 137 | 6 | **3,710** |
| Annual | Upland Crops | | | | | | | 147 | 6 | | 93 | | 147 | - | 93 |
| Annual | **Total** | **2,614** | **2,789** | **107** | **1.8** | **4,963** | **2,602** | **3,073** | **118** | | **8,766** | **-12** | **284** | **11** | **3,803** |

Note: Direct sowing & transplanting combined in wet season rice & yield is a weighted average of the two

Ou Tapoung

**As shown in the tables; overall yield increase of 1.2 ton/ha and paddy production increase of 3,700 ton are expected under the project.**

## (3) Project scope:

| Item | Description |
|---|---|
| 1. Direct Construction | |
| Rehabilitation of 3 existing systems | Anlong Khouch (800 ha), Wat Leap (570 ha)<br>Kosh Khsach (1,230 ha) |
| 1.1 Canal work including structures<br>- Canal rehabilitation<br>- Canal construction | <br>Main = 6 km , Secondary = 1 km,<br>Main = 7 km, Secondary = 26 km, Tertiary = 52 km<br>Drainage = 39 km |
| 1.2 Irrigation Pond Rehabilitation<br>- Dyke<br>- Structures | <br>10,150 m<br>Spillway, intake structure |
| 2. Other Components | |
| 2.1 FWUC level training | Training by FWUC support team through PDOWRAM and MOWRAM |
| 2.2 Agricultural support services | Field extension & training program by PDA/MAFF |

## (4) Implementation Schedule

(a) Survey, investigation, design, and tender; 12 months, (Tender; 3 months)
(c) Construction; 1 year
(d) Establishment of FWUC and training; 6 years (2 years for establishment, 4 years for training)
(e) Agriculture extension service; 4 years

## (5) Cost Estimate; Total Investment Costs: 6,036 (1,000USD)

| Project Name | Total Construction Costs | Other Costs | | | Total Investment Costs |
|---|---|---|---|---|---|
| | | FWUC level training & mobilization | Agricultural & other support | Land Acquisition Cost | |
| | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) |
| Ou Tapoung / Boeung Khnar Water Harvest. Pjt. | 5,610 | 224 | 34 | 168 | 6,036 |

## (6) Evaluation

| No. | Criteria | Full point | Point obtained |
|---|---|---|---|
| 1. | Resources factor | 30 | 23 |
| 2. | Economic factor | 20 | 11 |
| 3. | Social factor | 20 | 10.88 |
| 4. | Environmental factor | 10 | 10 |
| 5. | Ease of implementation | 10 | 6 |
| 6. | Maturity factor | 10 | 2 |
| | Total | 100 | 62.88 |

## Table 2.7-15 Lum Hach Rehabilitation Project

### (1) Project description:

| Item | Description |
|---|---|
| 1.1 Location | District: Boribo, RoLeaPha-ea; Commune: AnChagnRoung, PonLey, PoPel, ProSneb, and other 7 communes; Village: TaingPrich, Prosneb, TaingThneum, Kdol, and other 27 villages; UTM Reference: 425898, 1362360 |
| 1.2 River basin/ water source | Boribo river basin/ Boribo river |
| 1.3 Target group | 1) Number of household = 17,321 (Wet season medium- paddy)<br>2) Staff of PDOWRAM and PDA |
| 1.4 Objective of the project or program | 1) Enhancement of rice production through rehabilitation of Lum Hach reservoir and existing irrigation system |
| 1.5 Type of project or program | 1) Rehabilitation of existing irrigation system |
| 1.6 Objective area | 3,700 Ha |
| 1.7 Necessity of project/program | Water source for irrigation is limited in the Boribo basin. The Boribo, the largest river in the basin, originates from the Lum-Hack reservoir.<br>Since the reservoir has no structure to control water, effective usage of storage water of the reservoir is not attained. In order to increase capacity of the reservoir and to realize efective water supply using limited water source, provision of water control facilities would be crucial.<br>Rehabilitation of existing irrigation systems would be also a key issue to increase irrigated agriculture area. |

### (2) Agriculture:

**Present/Without-project & With-project Land Use of the Project Area**

| Land Use Sub-category | I. Present Area (ha) | I. Present Area (%) | II. With Project Area (ha) | II. With Project Area (%) | Increment (II - I) Area (ha) |
|---|---|---|---|---|---|
| 1. Irrigation Area | 2,000 | 46 | 3,700 | 85 | 1,700 |
| Normal Irrigation Paddy Field | 380 | 9 | 3,700 | 85 | 3,320 |
| Supplemental Irrigation Paddy Field | 405 | 9 | | | -405 |
| Field under Rainfed Condition | 1,215 | | | | |
| 2. Rainfed Paddy Field | 2,000 | 46 | | | -2,000 |
| 3. Right-of-ways | 350 | 8 | 650 | 15 | 300 |
| Total | 4,350 | 100 | 4,350 | 100 | 0 |

**Agricultural Support Programs Planned**

- Field Programs
  - Field Adaptability Test
  - Demonstration plot, Seed Multiplication etc.
- Farmer/Farmer group Training Programs
  - Training Course, FFS/IPM
  - Study Tour, VEA Training
- Mass guidance/Workshop
- Support Fund for Extension Staff
- Provision of Transportation Means

**Present/Without-project & With-project Crop Production in the Project Area**

| | Land Use Sub-category/ Crops | Present/Without-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | With-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | Increment Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Production (ton) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Normal Irrigation Field | 380 | | | | | 3,700 | | | | | 3,320 | | | |
| | Early Wet/Dry Season | | 380 | 10 | 3.0 | 1,140 | | | | | | | -380 | | -1,140 |
| | Wet Season Rice | | 380 | 10 | 3.0 | 1,140 | | 3,700 | 100 | 3.5 | 12,950 | | 3,320 | | 11,810 |
| | Upland Crops | | | | | | | 190 | 5.1 | 0.5 | 95 | | 190 | | 95 |
| | Supplemental Irri. Field | 405 | | | | | | | | | | -405 | | | |
| | Wet Season Rice | | 405 | 10 | 2.0 | 810 | | | | | | | -405 | | -810 |
| | Rainfed Paddy Field | 3,215 | | | | | | | | | | -3,215 | | | |
| | Wet Season Rice | | 3,215 | 80 | 1.5 | 4,823 | | | | | | | -3,215 | | -4,823 |
| Annual | **Annual Rice** | | **4,380** | **110** | **1.8** | **7,913** | | **3,700** | **100** | **3.5** | **12,950** | | -680 | -10 | **5,037** |
| Annual | Upland Crops | | | | | | | 190 | 5 | | 95 | | 190 | - | 95 |
| Annual | **Total** | **4,000** | **4,380** | **110** | | **7,913** | **3,700** | **3,890** | **105** | | **13,045** | **-300** | **-490** | **-4** | **5,132** |

Lum Hack

**As shown in the tables; overall yield increase of 1.7 ton/ha and paddy production increase of 5,000 ton are expected under the project.**

**(3) Project scope:**

| Item | | Description |
|---|---|---|
| 1. Direct Construction | | |
| 1.1 | Lum Hack reservoir outlet weir | Total width =84m, Weir body = 42m, Height =10m<br>Gate: Automatic gate 3 nos. ( W 7.2 m x H 5.1 m )<br>Slide gate 4 nos. ( W 2.0 m x H 4.0 m ) |
| | - Intake structure | 2 nos. ; Slide gate 3 nos. ( W 2.0 m x H 2.5 m )/ intake |
| 1.2 | Canal rehabilitation* | Main = - km, Secondary = 12 km |
| | Canal construction*<br>( *; including structures) | Main = 7km, Secondary = 25 km, Tertiary = 74 km<br>Drainage = 56 km |
| 2. Other Components | | |
| 2.1 | FWUC level training | Training by FWUC support team through PDOWRAM and MOWRAM |
| 2.2 | Agricultural support services | Field extension & training program by PDA/MAFF |

**(4) Implementation Schedule**

(a) Survey, investigation, design, and tender; 12 months, (Tender; 3 months)
(c) Construction; 2 years
(d) Establishment of FWUC and training; 6 years (2 years for establishment, 4 years for training)
(e) Agriculture extension service; 4 years

**(5) Cost Estimate** Total Investment Costs: 10,174 (1,000USD)

| Project Name | Total Construction Costs | Other Costs | | | Total Investment Costs |
|---|---|---|---|---|---|
| | | FWUC level training & mobilization | Agricultural & other support | Land Acquisition Cost | |
| | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) |
| Lum Hach Rehab. Project | 9,467 | 379 | 44 | 284 | 10,174 |

**(6) Evaluation**

| No. | Criteria | Full point | Point obtained |
|---|---|---|---|
| 1. | Resources factor | 30 | 22.5 |
| 2. | Economic factor | 20 | 11 |
| 3. | Social factor | 20 | 10 |
| 4. | Environmental factor | 10 | 8 |
| 5. | Ease of implementation | 10 | 10 |
| 6. | Maturity factor | 10 | 10 |
| | Total | 100 | 71.50 |

## Table 2.7-16 7th January Canal Rehabilitation Project

### (1) Project description:

| Item | Description |
|---|---|
| 1.1 Location | District: Boribo, RoLeaPha-ea; Commune: BanTeayPreal, MeLum, Chork, ProSneb, and other 9 communes; Village: TopTbeng, Prosneb, ChralorngKok, Saorngl, and other 18 villages; UTM Reference: 425898, 1362360 |
| 1.2 River basin/ water source | Small streams such as Khlong Anlong, Chrang, Svay, etc. |
| 1.3 Target group | 1) Number of household = 5,887 (Wet season medium- paddy)<br>2) Staff of PDOWRAM and PDA |
| 1.4 Objective of the project | Enhancement of rice production through rehabilitation of existing irrigation system |
| 1.5 Type of project | Rehabilitation of existing irrigation system |
| 1.6 Objective area | 2,000Ha |
| 1.7 Necessity of project | The 7th January canal has a role of water source for more than 20 sub-systems.<br>The canal was constructed in the late 1970's to collect water from streams, and then to supply water for irrigation sub-systems and pond systems located in downstream area. However, the canal lost the function because of natural disasters in the early 1980's. Although local people, government and other organizations made many efforts for repair work to sub-systems, they recovered only a part of the function.<br>In order to recover the function, comprehensive rehabilitation of the 7th canal, and sub-irrigation systems are necessary. |

### (2) Agriculture

**Present/Without-project & With-project Land Use of the Project Area**

| Land Use Sub-category | I. Present Area (ha) | I. Present Area (%) | II. With Project Area (ha) | II. With Project Area (%) | Increment (II - I) Area (ha) |
|---|---|---|---|---|---|
| 1. Irrigation Area | 1,000 | 43 | 2,000 | 85 | 1,000 |
| Normal Irrigation Paddy Field | 190 | 8 | 2,000 | 85 | 1,810 |
| Supplemental Irrigation Paddy Field | 203 | 9 | | | -203 |
| Field under Rainfed Condition | 607 | | | | |
| 2. Rainfed Paddy Field | 1,170 | 50 | | | -1,170 |
| 3. Right-of-ways | 180 | 8 | 350 | 15 | 170 |
| Total | 2,350 | 100 | 2,350 | 100 | 0 |

**Agricultural Support Programs Planned**

- Field Programs
  - Field Adaptability Test
  - Demonstration plot, Seed Multiplication etc.
- Farmer/Farmer group Training Programs
  - Training Course, FFS/IPM
  - Study Tour, VEA Training
- Mass guidance/Workshop
- Provision of Transportation Means
- Support Fund for Extension Staff
- Provision of Transportation Means

**Present/Without-project & With-project Crop Production in the Project Area**

| | Land Use Sub-category/ Crops | Present/Without-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | With-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | Increment Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Production (ton) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Normal Irrigation Field | 190 | | | | | 2,000 | | | | | 1,810 | | | |
| | Early Wet/Dry Season | | 190 | 9 | 3.0 | 570 | | | | | | | -190 | | -570 |
| | Wet Season Rice | | 190 | 9 | 3.0 | 570 | | 2,000 | 100 | 3.5 | 7,000 | | 1,810 | | 6,430 |
| | Upland Crops | | | | | | | 100 | 5.0 | 0.5 | 50 | | 100 | | 50 |
| | Supplemental Irri. Field | 203 | | | | | | | | | | -203 | | | |
| | Wet Season Rice | | 203 | 9 | 2.0 | 406 | | | | | | | -203 | | -406 |
| | Rainfed Paddy Field | 1,777 | | | | | | | | | | -1,777 | | | |
| | Wet Season Rice | | 1,777 | 82 | 1.5 | 2,666 | | | | | | | -1,777 | | -2,666 |
| Annual | **Annual Rice** | | **2,360** | **109** | **1.8** | **4,212** | | **2,000** | **100** | **3.5** | **7,000** | | -360 | -9 | **2,788** |
| Annual | Upland Crops | | | | | | | 100 | 5 | | 50 | | 100 | - | 50 |
| | **Total** | **2,170** | **2,360** | **109** | | **4,212** | **2,000** | **2,100** | **105** | | **7,050** | **-170** | **-260** | **-4** | **2,838** |

7th Jan

**As shown in the tables; overall yield increase of 1.7 ton/ha and production increase of 2,800 ton are expected under the project.**

**(3) Project scope:**

| Item | Description |
|---|---|
| 1. Direct Construction | |
| 1.1 Canal work including structures<br>- Canal rehabilitation | Main = 20 km, Secondary = 12 km |
| - Canal construction | Secondary = 8 km, Tertiary = 40 km<br>Drainage = 30 km |
| 2. Other Components | |
| 2.1 FWUC level training | Training by FWUC support team through PDOWRAM and MOWRAM |
| 2.2 Agricultural support services | Field extension & training program by PDA/MAFF |

**(4) Implementation Schedule**

(a) Survey, investigation, design, and tender; 12 months, (Tender; 3 months)
(c) Construction; 1 year
(d) Establishment of FWUC and training; 6 years, (2 years for establishment, 4 years for training)
(e) Agriculture extension service; 4 years

**(5) Cost Estimate** Total Investment Costs: 5,339 (1,000USD)

| Project Name | Total Construction Costs | Other Costs | | | Total Investment Costs |
|---|---|---|---|---|---|
| | | FWUC level training & mobilization | Agricultural & other support | Land Acquisition Cost | |
| | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) |
| 7th January Canal Rehab. Project | 4,967 | 199 | 24 | 149 | 5,339 |

**(6) Evaluation**

| No. | Criteria | Full point | Point obtained |
|---|---|---|---|
| 1. | Resources factor | 30 | 21 |
| 2. | Economic factor | 20 | 11 |
| 3. | Social factor | 20 | 8 |
| 4. | Environmental factor | 10 | 10 |
| 5. | Ease of implementation | 10 | 6 |
| 6. | Maturity factor | 10 | 6 |
| | Total | 100 | 62.00 |

## Table 2.7-17 Khvet Rehabilitation Project

### (1) Project description:

| Item | Description |
|---|---|
| 1.1 Location | District: Teuk Phos; Commune: Kbal Teuk; Village: Khvet; UTM Reference: 422564, 1314964 |
| 1.2 River basin/ water source | Boribo river basin/ Chreav stream |
| 1.3 Target group | 1) Number of household = 330 (Wet season medium- paddy)<br>2) Staff of PDOWRAM and PDA |
| 1.4 Objective of the project | Enhancement of rice production through re-construction of Khvet weir and rehabilitation of existing irrigation system |
| 1.5 Type of project | Rehabilitation of existing irrigation system |
| 1.6 Objective area | 250Ha |
| 1.7 Necessity of project | The proposed Khvet rehabilitation project is a typical small river irrigation system.<br>The Khvet weir was constructed twice in French colonial period and in the 1970's. Both of them completely lost their function, and the system area has relied only on rainfall since the late 1970's.<br>In order to cover irrigation area widely, re-construction of weir at the location of French colonial period would be necessary. In addition, rehabilitation of irrigation canals would be also required to irrigate existing cultivation area. |

### (2) Agriculture

**Present/Without-project & With-project Land Use of the Project Area**

| Land Use Sub-category | I. Present Area (ha) | I. Present Area (%) | II. With Project Area (ha) | II. With Project Area (%) | Increment (II - I) Area (ha) |
|---|---|---|---|---|---|
| 1. Irrigation Area | 250 | 86 | 250 | 86 | 0 |
| Normal Irrigation Paddy Field | | | 250 | 86 | 250 |
| Supplemental Irrigation Paddy Field | 25 | 9 | | | -25 |
| Field under Rainfed Condition | 225 | 78 | | | -225 |
| 2. Rainfed Paddy Field | | | | | |
| 3. Right-of-ways | 40 | 14 | 40 | 14 | 0 |
| Total | 290 | 100 | 290 | 100 | 0 |

**Agricultural Support Programs Planned**

- Field Programs
  - Demonstration plot
  - Seed Multiplication etc.
- Farmer/Farmer group Training Programs
  - Training Course
- Mass guidance/Workshop
- Support Fund for Extension Staff
- Provision of Transportation Means

**Present/Without-project & With-project Crop Production in the Project Area**

| | Land Use Sub-category/ Crops | Present/Without-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | With-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | Increment Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Production (ton) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Normal Irrigation Field | | | | | | 250 | | | | | 250 | | | |
| | Early Wet/Dry Season | | | | | | | | | | | | 0 | | 0 |
| | Wet Season Rice | | | | | | | 250 | 100 | 3.5 | 875 | | 250 | | 875 |
| | Upland Crops | | | | | | | 10 | 4.0 | 0.5 | 5 | | 10 | | 5 |
| | Supplemental Irri. Field | 25 | | | | | | | | | | -25 | | | |
| | Wet Season Rice | | 25 | 10 | 2.0 | 50 | | | | | | | -25 | | -50 |
| | Rainfed Paddy Field | 225 | | | | | | | | | | -225 | | | |
| | Wet Season Rice | | 225 | 90 | 1.5 | 338 | | | | | | | -225 | | -338 |
| Annual | **Annual Rice** | | **250** | **100** | **1.6** | **388** | | **250** | **100** | **3.5** | **875** | | **0** | **0** | **487** |
| | Upland Crops | | | | | | | 10 | 4 | | 5 | | 10 | - | 5 |
| | **Total** | **250** | **250** | **100** | **1.6** | **388** | **250** | **260** | **104** | | **880** | **0** | **10** | **4** | **492** |

Khvet

**As shown in the tables; overall yield increase of 1.9 ton/ha and paddy production increase of 490 ton are expected under the project.**

## (3) Project scope:

| Item | | Description |
|---|---|---|
| 1. Direct Construction | | |
| 1.1 | Khvet weir | Total width =21m, Weir body = 15m, Height =3 m<br>Slide gate 1 no. ( W 2.0 m x H 2.0 m ) |
| | - Intake structure | 1 no. ; Slide gate 2 nos. ( W 2.0 m x H 2.0 m ) |
| 1.2 | Canal rehabilitation* | Main = 1.5 km, Secondary = - km |
| | Canal construction*<br>( *; including structures) | Main = - km, Secondary = 2.5 km, Tertiary = 5 km<br>Drainage = 3.8 km |
| 2. Other Components | | |
| 2.1 | FWUC level training | Training by FWUC support team through PDOWRAM and MOWRAM |
| 2.2 | Agricultural support services | Field extension & training program by PDA/MAFF |

## (4) Implementation Schedule

(a) Survey, investigation, design, and tender; 12 months, (Tender; 3 months)
(c) Construction; 1 year
(d) Establishment of FWUC and training; 5 years (2 years for establishment, 3 years for training)
(e) Agriculture extension service; 3 years

## (5) Cost Estimate

Total Investment Costs: 890 (1,000USD)

| Project Name | Total Construction Costs | Other Costs | | | Total Investment Costs |
|---|---|---|---|---|---|
| | | FWUC level training & mobilization | Agricultural & other support | Land Acquisition Cost | |
| | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) |
| Khvet Rehab. Project | 825 | 33 | 7 | 25 | 890 |

## (6) Evaluation

| No. | Criteria | Full point | Point obtained |
|---|---|---|---|
| 1. | Resources factor | 30 | 26 |
| 2. | Economic factor | 20 | 10 |
| 3. | Social factor | 20 | 8 |
| 4. | Environmental factor | 10 | 8 |
| 5. | Ease of implementation | 10 | 2 |
| 6. | Maturity factor | 10 | 2 |
| | Total | 100 | 56.00 |

## Table 2.7-18 Ta Ram Rehabilitation Project

### (1) Project description:

| Item | Description |
|---|---|
| 1.1 Location | District: Teuk Phos; Commune: Kbal Teuk; Village: Khvet; UTM Reference: 424500, 1317058 |
| 1.2 River basin/ water source | Boribo river basin/ Sre Bak Stream |
| 1.3 Target group | 1) Number of household = 230 (Wet season medium- paddy)<br>2) Staff of PDOWRAM and PDA |
| 1.4 Objective of the project | Enhancement of rice production through re-construction of Ta Ram weir and rehabilitation of existing irrigation system |
| 1.5 Type of project | Rehabilitation of existing irrigation system |
| 1.6 Objective area | 180Ha |
| 1.7 Necessity of project | The proposed Ta Ram rehabilitation project is a typical small river irrigation system with a regulating pond.<br>The Ta Ram weir was constructed in the upper reaches of the Sre Bak stream in the 1970's. After four years' operation, the system lost the function. The main canal dyke near the regulating pond has collapsed repeatedly.<br>In order to recover the function, comprehensive rehabilitation would be required. |

### (2) Agriculture

**Present/Without-project & With-project Land Use of the Project Area**

| Land Use Sub-category | I. Present Area (ha) | I. Present Area (%) | II. With Project Area (ha) | II. With Project Area (%) | Increment (II - I) Area (ha) |
|---|---|---|---|---|---|
| 1. Irrigation Area | 180 | 95 | 180 | 95 | 0 |
| Normal Irrigation Paddy Field | | | 180 | 95 | 180 |
| Supplemental Irrigation Paddy Field | 18 | 10 | | | -18 |
| Field under Rainfed Condition | 162 | 86 | | | -162 |
| 2. Rainfed Paddy Field | | | | | |
| 3. Right-of-ways | 9 | 5 | 9 | 5 | 0 |
| Total | 189 | 100 | 189 | 100 | 0 |

**Agricultural Support Programs Planned**

- Field Programs
  - Demonstration plot
  - Seed Multiplication etc.
- Farmer/Farmer group Training Programs
  - Training Course
- Mass guidance/Workshop
- Support Fund for Extension Staff
- Provision of Transportation Means

**Present/Without-project & With-project Crop Production in the Project Area**

| | Land Use Sub-category/ Crops | Present/Without-project Area (ha) | Present/Without-project Cropped Area (ha) | Present/Without-project Cropping Intensity (%) | Present/Without-project Yield (ton/ha) | Present/Without-project Production (ton) | With-project Area (ha) | With-project Cropped Area (ha) | With-project Cropping Intensity (%) | With-project Yield (ton/ha) | With-project Production (ton) | Increment Area (ha) | Increment Cropped Area (ha) | Increment Cropping Intensity (%) | Increment Production (ton) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Normal Irrigation Field | | | | | | 180 | | | | | 180 | | | |
| | Early Wet/Dry Season | | | | | | | | | | | | 0 | | 0 |
| | Wet Season Rice | | | | | | | 180 | 100 | 3.5 | 630 | | 180 | | 630 |
| | Upland Crops | | | | | | | 10 | 5.6 | 0.5 | 5 | | 10 | | 5 |
| | Supplemental Irri. Field | 18 | | | | | | | | | | -18 | | | |
| | Wet Season Rice | | 18 | 10 | 2.0 | 36 | | | | | | | -18 | | -36 |
| | Rainfed Paddy Field | 162 | | | | | | | | | | -162 | | | |
| | Wet Season Rice | | 162 | 90 | 1.5 | 243 | | | | | | | -162 | | -243 |
| Annual | **Annual Rice** | | **180** | **100** | **1.6** | **279** | | **180** | **100** | **3.5** | **630** | | 0 | 0 | **351** |
| | Upland Crops | | | | | | | 10 | 6 | | 5 | | 10 | - | 5 |
| | **Total** | **180** | **180** | **100** | | **279** | **180** | **190** | **106** | | **635** | **0** | **10** | **6** | **356** |

Ta Ram

**As shown in the tables; overall yield increase of 1.9 ton/ha and paddy production increase of 350 ton are expected under the project.**

**(3) Project scope:**

| Item | | Description |
|---|---|---|
| 1. Direct Construction | | |
| 1.1 | Ta Ram weir | Total width =21m, Weir body = 15m, Height =3.5 m<br>Slide gate 1 no. ( W 2.0 m x H 2.5 m ) |
| | - Intake structure | 1 no. ; Slide gate 2 nos. ( W 2.0 m x H 2.0 m ) |
| 1.2 | Canal rehabilitation* | Main = 3.5 km, Secondary = - km |
| | Canal construction*<br>( *; including structures) | Main = - km, Secondary = 2 km, Tertiary = 4 km<br>Drainage = 2.7 km |
| 1.3 | Irrigation pond | 1 no. |
| | Dyke rehabilitation | L = 0.5km |
| | Spillway | Spillway 1 no., Outlet 1 no. |
| 2. Other Components | | |
| 2.1 | FWUC level training | Training by FWUC support team through PDOWRAM and MOWRAM |
| 2.2 | Agricultural support services | Field extension & training program by PDA/MAFF |

**(4) Implementation Schedule**

(a) Survey, investigation, design, and tender; 12 months, (Tender; 3 months)
(c) Construction; 1 year
(d) Establishment of FWUC and training; 5 years (2 years for establishment, 3 years for training)
(e) Agriculture extension service; 3 years

**(5) Cost Estimate** Total Investment Costs: 981 (1,000USD)

| Project Name | Total Construction Costs | Other Costs | | | Total Investment Costs |
|---|---|---|---|---|---|
| | | FWUC level training & mobilization | Agricultural & other support | Land Acquisition Cost | |
| | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) |
| Ta Ram Rehab. Project | 911 | 36 | 7 | 27 | 981 |

**(6) Evaluation**

| No. | Criteria | Full point | Point obtained |
|---|---|---|---|
| 1. | Resources factor | 30 | 26 |
| 2. | Economic factor | 20 | 7 |
| 3. | Social factor | 20 | 8 |
| 4. | Environmental factor | 10 | 10 |
| 5. | Ease of implementation | 10 | 2 |
| 6. | Maturity factor | 10 | 2 |
| | Total | 100 | 55.00 |

## Table 2.7-19 Chak Teum, Trapeang Khlong, Don Pov Rehabilitation Project

### (1) Project description:

| Item | Description |
|---|---|
| 1.1 Location | District: Teuk Phos; Commune: Chieab; Village: KoshKhtum, TaNey, Chieab; UTM Reference: 426405, 1331406 |
| 1.2 River basin/ water source | Boribo river basin/ O Khley stream |
| 1.3 Target group | 1) Number of household=1,473 (Wet season medium- paddy)<br>2) Staff of PDOWRAM and PDA |
| 1.4 Objective of the project | Enhancement of rice production through re-construction of weir and rehabilitation of existing irrigation system |
| 1.5 Type of project | Rehabilitation of existing irrigation system |
| 1.6 Objective area | 980 Ha |
| 1.7 Necessity of project | The proposed project consists of three irrigation systems. The project is a typical combination system of irrigation pond and small river.<br>The systems were constructed in the late 1970's. After a few years' operation, they lost their functions.<br>Small river irrigation systems would need a weir for secure water supply, and rehabilitation of the dyke is necessary for the Chak Teun system. |

### (2) Agriculture

**Present/Without-project & With-project Land Use of the Project Area**

| Land Use Sub-category | I. Present Area (ha) | I. Present Area (%) | II. With Project Area (ha) | II. With Project Area (%) | Increment (II - I) Area (ha) |
|---|---|---|---|---|---|
| 1. Irrigation Area | 980 | 85 | 980 | 85 | 0 |
| Normal Irrigation Paddy Field | | | 980 | 85 | 980 |
| Supplemental Irrigation Paddy Field | 98 | 9 | | | -98 |
| Field under Rainfed Condition | 882 | 77 | | | -882 |
| 2. Rainfed Paddy Field | | | | | |
| 3. Right-of-ways | 170 | 15 | 170 | 15 | 0 |
| Total | 1,150 | 100 | 1,150 | 100 | 0 |

**Agricultural Support Programs Planned**

- Field Programs
  - Field Adaptability Test, Demonstration plot
  - Seed Multiplication etc.
- Farmer/Farmer group Training Programs
  - Training Course
- Mass guidance/Workshop
- Support Fund for Extension Staff
- Provision of Transportation Means

**Present/Without-project & With-project Crop Production in the Project Area**

| | Land Use Sub-category/ Crops | Present/Without-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | With-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | Increment Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Production (ton) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Normal Irrigation Field | | | | | | 980 | | | | | 980 | | | |
| | Early Wet/Dry Season | | | | | | | | | | | | 0 | | 0 |
| | Wet Season Rice | | | | | | | 980 | 100 | 3.5 | 3,430 | | 980 | | 3,430 |
| | Upland Crops | | | | | | | 50 | 5.1 | 0.5 | 25 | | 50 | | 25 |
| | Supplemental Irri. Field | 98 | | | | | | | | | | -98 | | | |
| | Wet Season Rice | | 98 | 10 | 2.0 | 196 | | | | | | | -98 | | -196 |
| | Rainfed Paddy Field | 882 | | | | | | | | | | -882 | | | |
| | Wet Season Rice | | 882 | 90 | 1.5 | 1,323 | | | | | | | -882 | | -1,323 |
| Annual | **Annual Rice** | | **980** | **100** | **1.6** | **1,519** | | **980** | **100** | **3.5** | **3,430** | | 0 | 0 | **1,911** |
| Annual | Upland Crops | | | | | | | 50 | 5 | | 25 | | 50 | - | 25 |
| Annual | **Total** | **980** | **980** | **100** | **1.6** | **1,519** | **980** | **1,030** | **105** | | **3,455** | **0** | **50** | **5** | **1,936** |

Chek Teum

**As shown in the tables; overall yield increase of 1.9 ton/ha and production increase of 1,900 ton are expected under the project.**

## (3) Project scope:

| Item | | Description |
|---|---|---|
| 1. Direct Construction | | |
| | Rehabilitation of 3 existing systems | Chak Teum (230 ha), Trapeang Khlong (530 ha)<br>Don Pov (220 ha) |
| 1.1 | Weir construction | Total width =21m, Weir body = 15m, Height =3.5 m<br>Slide gate 1 no. ( W 2.0 m x H 2.5 m ) |
| | - Intake structure | 1 no. ; Slide gate 2 nos. ( W 2.0 m x H 2.0 m ) |
| 1.2 | Canal work including structures | |
| | - Canal rehabilitation* | Main = 5 km, Secondary = - km |
| | - Canal construction* | Main = 2 km, Secondary = 10 km, Tertiary = 17 km<br>Drainage = 15 km |
| 1.3 | Irrigation Pond | 1 no. |
| | - Dyke rehabilitation | 500 m |
| | - Structure | Spillway 1, Intake 1 |
| 2. Other Components | | |
| 2.1 | FWUC level training | Training by FWUC support team through PDOWRAM and MOWRAM |
| 2.2 | Agricultural support services | Field extension & training program by PDA/MAFF |

## (4) Implementation Schedule

(a) Survey, investigation, design, and tender; 12 months, (Tender; 3 months)
(c) Construction; 1 year
(d) Establishment of FWUC and training; 5 years (2 years for establishment, 3 years for training)
(e) Agriculture extension service; 3 years

## (5) Cost Estimate

Total Investment Costs: 2,465 (1,000USD)

| Project Name | Total Construction Costs | Other Costs | | | Total Investment Costs |
|---|---|---|---|---|---|
| | | FWUC level training & mobilization | Agricultural & other support | Land Acquisition Cost | |
| | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) |
| Chak Teum, Trapeang Khlong, Don Pov Rehab. | 2,291 | 92 | 13 | 69 | 2,465 |

## (6) Evaluation

| No. | Criteria | Full point | Point obtained |
|---|---|---|---|
| 1. | Resources factor | 30 | 23 |
| 2. | Economic factor | 20 | 12 |
| 3. | Social factor | 20 | 10.83 |
| 4. | Environmental factor | 10 | 10 |
| 5. | Ease of implementation | 10 | 2 |
| 6. | Maturity factor | 10 | 6 |
| | Total | 100 | 63.83 |

## Table 2.7-20 Teuk Laak and Trapeang Thlan Rehabilitation Project

### (1) Project description:

| Item | Description |
|---|---|
| 1.1 Location | District: Teuk Phos; Commune: KhlongPoPork, Aphivat; Village: TeukLaak, SreTaChey; UTM Reference: 442624, 1333278 |
| 1.2 River basin/water source | Boribo river basin/ Pernarng stream |
| 1.3 Target group | 1) Number of household = 296 (Wet season medium- paddy)<br>2) Staff of PDOWRAM and PDA |
| 1.4 Objective of the project | Enhancement of rice production through rehabilitation of existing irrigation system |
| 1.5 Type of project | Rehabilitation of existing irrigation system |
| 1.6 Objective area | 230Ha |
| 1.7 Necessity of project | The proposed project consists of two systems, namely Teuk Laak and Trapeang Thlan. The project is a typical water harvesting system in undulated hilly area without secured water resource.<br>These systems were constructed in the late 1970's. After a few years' operation, the dykes for water harvesting were damaged, and the systems lost their water source.<br>In order to recover the function, rehabilitation of dyke and canals are necessary. |

### (2) Agriculture

**Present/Without-project & With-project Land Use of the Project Area**

| Land Use Sub-category | I. Present Area (ha) | I. Present Area (%) | II. With Project Area (ha) | II. With Project Area (%) | Increment (II - I) Area (ha) |
|---|---|---|---|---|---|
| 1. Irrigation Area | 230 | 95 | 230 | 95 | 0 |
| Normal Irrigation Paddy Field | | | 230 | 95 | 230 |
| Supplemental Irrigation Paddy Field | 23 | 9 | | | -23 |
| Field under Rainfed Condition | 207 | 85 | | | -207 |
| 2. Rainfed Paddy Field | | 0 | | | 0 |
| 3. Right-of-ways | 13 | 5 | 13 | 5 | 0 |
| Total | 243 | 100 | 243 | 100 | 0 |

**Agricultural Support Programs Planned**

- Field Programs
  - Demonstration plot
  - Seed Multiplication etc.
- Farmer/Farmer group Training Programs
  - Training Course
- Mass guidance/Workshop
- Support Fund for Extension Staff
- Provision of Transportation Means

**Present/Without-project & With-project Crop Production in the Project Area**

| | Land Use Sub-category/ Crops | Present/Without-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | With-project Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Yield (ton/ha) | Production (ton) | Increment Area (ha) | Cropped Area (ha) | Cropping Intensity (%) | Production (ton) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Normal Irrigation Field | | | | | | 230 | | | | | 230 | | | |
| | Early Wet/Dry Season | | | | | | | | | | | | 0 | | 0 |
| | Wet Season Rice | | | | | | | 230 | 100 | 3.5 | 805 | | 230 | | 805 |
| | Upland Crops | | | | | | | 10 | 4.3 | 0.5 | 5 | | 10 | | 5 |
| | Supplemental Irri. Field | 23 | | | | | | | | | | -23 | | | |
| | Dry Season | | | | | | | | | | | | | | |
| | Wet Season Rice | | 23 | 10 | 2.0 | 46 | | | | | | | -23 | | -46 |
| | Rainfed Paddy Field | 207 | | | | | | | | | | -207 | | | |
| | Dry Season | | | | | | | | | | | | | | |
| | Wet Season Rice | | 207 | 90 | 1.5 | 311 | | | | | | | -207 | | -311 |
| Annual | **Annual Rice** | | **230** | **100** | **1.6** | **357** | | **230** | **100** | **3.5** | **805** | | **0** | **0** | **448** |
| Annual | Upland Crops | | | | | | | 10 | 4 | | 5 | | 10 | - | 5 |
| Annual | **Total** | **230** | **230** | **100** | | **357** | **230** | **240** | **104** | | **810** | **0** | **10** | **4** | **453** |

Teuk Laak

**As shown in the tables; overall yield increase of 1.9 ton/ha and paddy production increase of 450 ton are expected under the project.**

## (3) Project scope:

| Item | Description |
|---|---|
| 1. Direct Construction | |
| Rehabilitation of 2 existing systems | Teuk Laak (105 ha), Trapeang Thlan (125 ha) |
| 1.1 Canal work including structures<br>- Canal rehabilitation<br>- Canal construction | <br>Main = 5 km, Secondary =0.5 km<br>Main = - km, Secondary = 1.8 km, Tertiary = 4.6 km<br>Drainage = 3.5 km |
| 1.2 Water harvesting dyke work<br>- Dyke rehabilitation<br>- Construction of structure | 2 nos.<br>2,000 m<br>2 intakes |
| 2. Other Components | |
| 2.1 FWUC level training | Training by FWUC support team through PDOWRAM and MOWRAM |
| 2.2 Agricultural support services | Field extension & training program by PDA/MAFF |

## (4) Implementation Schedule

(a) Survey, investigation, design, and tender; 12 months, (Tender; 3 months)
(c) Construction; 1 year
(d) Establishment of FWUC and training; 5 years (2 year for establishment, 3 years for training)
(e) Agriculture extension service; 3 years

## (5) Cost Estimate

Total Investment Costs: 744 (1,000USD)

| Project Name | Total Construction Costs | Other Costs | | | Total Investment Costs |
|---|---|---|---|---|---|
| | | FWUC level training & mobilization | Agricultural & other support | Land Acquisition Cost | |
| | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) | (1,000 USD) |
| Teuk Laak, Trapeang Thlan Rehab. Project | 688 | 28 | 7 | 21 | 744 |

## (6) Evaluation

| No. | Criteria | Full point | Point obtained |
|---|---|---|---|
| 1. | Resources factor | 30 | 21 |
| 2. | Economic factor | 20 | 10 |
| 3. | Social factor | 20 | 9.72 |
| 4. | Environmental factor | 10 | 10 |
| 5. | Ease of implementation | 10 | 2 |
| 6. | Maturity factor | 10 | 2 |
| | Total | 100 | 54.72 |