QUANG NGAI RURAL DEVELOPMENT PROGRAM (RUDEP) - PHASE 2

Participatory Rural Appraisal (PRA) Report

Prepared for
AusAID
Australian Embassy
8 Dao Tan Street
Ba Dinh District.
Hanoi, VIET NAM

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Prepared by
URS Sustainable Development
in association with Kellogg Brown & Root and
World Wide Project Management Services
Project Managers and Consultants
Adelaide Australia
DONOR AGENCY
AusAID
Australian Embassy
8 Dao Tan Street, Ba Dinh District, Hanoi, Viet Nam
Ph: +84 4 8317754/Ext 175 (Project Officer), Fax: +84 4 8317711

LEAD COUNTERPART AGENCY
Department of Planning and Investment
96 Nguyen Nghiem Street, Quang Ngai Town
Quang Ngai Province, Viet Nam
Ph: +84 55 825701

PROGRAM MANAGEMENT UNIT
No 4 Pham Van Dong Street, Quang Ngai Town
Quang Ngai Province, Viet Nam
Ph: +84 55 816261-6, Fax: +84 55 816260

AUSTRALIAN MANAGING CONTRACTOR
URS Sustainable Development
25 North Terrace
Hackney SA 5069
Ph: +61 8 8366 1000, Fax: +61 8 8366 1001
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**Acronyms**

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<th>Description</th>
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<tr>
<td>AGIT</td>
<td>Activity Group Implemented Trial</td>
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<tr>
<td>CBRIP</td>
<td>Community Based Rural Infrastructure Project</td>
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<tr>
<td>CPC</td>
<td>Commune People’s Committee</td>
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<tr>
<td>CPRGS</td>
<td>Comprehensive Poverty Reduction and Growth Strategy</td>
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<td>DDO</td>
<td>District Development Officer</td>
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<td>DOLISA</td>
<td>Department of Labour, Invalids and Social Affairs</td>
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<td>HCMC</td>
<td>Ho Chi Minh City</td>
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<td>HH</td>
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<td>Viet Nam Bank for Agriculture and Rural Development</td>
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<td>VSCF</td>
<td>Village Credit and Savings Facilities</td>
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Executive Summary

PRA exercises were conducted in late 2003 and early 2004 in nine Quang Ngai Rural Development Program (RUDEP) Communes. These exercises were undertaken to gain a better understanding of household resources and farming systems and to support participatory planning processes. Up to nine Participatory Rural Appraisal (PRA) exercises were conducted in each Commune: Historical Timelines; Transect Walks; Venn Diagrams; Village Mapping; Seasonal Calendars; Matrix Scoring and Ranking; Wealth Ranking; and, Focus Group Discussions. The PRA exercises revealed:

- Natural disasters (droughts and floods) have affected households in RUDEP Communes throughout history. The close proximity of many households and agricultural land to rivers leaves them vulnerable to flash flooding. Floods and droughts have destroyed household assets, crops and affected food security. Livelihood projects support households to develop natural disaster mitigation, coping and rehabilitation activities. The activities will increase the resilience of communities to overcome the affects of chronic and acute climatic conditions.

- Livelihoods improved following the end of the American War and allowed households to reside permanently in their Communes. Renovation Policies (Doi Moi Economic Reforms) of the Central Government had a positive impact on households. These renovation policies improved living conditions, income and social services. Central Government policies and programs that facilitate the empowerment of rural households must continue to be supported by RUDEP.

- Available land (‘bare hills’) exists in many Communes. Much of this land is not used sustainably or to its optimum potential. Households identified forestry, fruit and agro-forestry as income generating activities to sustainably cultivate the land. RUDEP could support long-term forestry and agro-forestry technologies and demonstrations, and where possible, support Commune People’s Committees (CPCs) to allocate land to households through land ownership certificates (‘Red Books’).

- The H’re ethnic minority identified difficulties in generating income and the marketing of agricultural commodities. Their language and customs are respected locally; however, they face difficulties in identifying and accessing markets and understanding new information due to poverty, illiteracy, and poor numeracy and language skills. Activities to support increasing the marketing power of the H’re through study tours, functional literacy and numeracy skills training, and incorporating marketing into demonstration activities are strongly justified and warranted.

- Rice cultivation is affected by diseases and pests. Diseases and pests are more common in upland ethnic minority Communes and in 3-crop rice production systems. Rice production intensity will increase as supporting irrigation systems are built and improved. The introduction of rice cultivation and Integrated Pest Management (IPM) technologies is recommended to reduce disease and pest incidence and improve food security in upland Communes.

1 Tinh Tho Commune (Son Tinh District); Hanh Phuoc Commune (Nghia Hanh District); Binh Minh Commune (Binh Son District); Nghia Tho Commune (Tu Nghia District); Son Trung Commune (Son Ha District); Duc Phong Commune (Mo Duc District); Pho Chau Commune (Duc Pho Commune); Son Hai Commune (Son Ha District); and, Son Giang Commune (Son Ha District).
• Diseases are a common problem facing livestock producing households. Diseases in cattle and buffaloes occur from September to December. Pigs suffer diseases from September to February. Poultry commonly suffer epidemic disease problems in the summer months. Animal health training and the introduction of vaccines and vaccination technologies for households is warranted. This approach is currently being supported by RUDEP and the Sub-Department of Animal Health for Village Savings and Credit Facility (VSCF) members.

• Peak borrowing and expenditure is associated with Tet\(^2\) celebrations. Three forms of borrowing are common: borrowing for agricultural production; borrowing of funds for general living expenses (e.g. education); and, borrowing of food. VSCFs will provide an avenue for households to borrow for production purposes and facilitate savings to cover general living expenses (e.g. education). Food security problems can be addressed through RUDEP’s Livelihood Projects through nutritional campaigns (e.g. child malnutrition) in combination with appropriate income generating activities (e.g. home gardens and semi-scavenging chicken production models).

• Of 6,194 households involved in Wealth Ranking exercises, 2,785 (45%) were considered poor. Wealth Ranking estimates of poverty was higher than all Commune Department of Labour, Invalids and Social Affairs (DOLISA) poor household lists (except Nghia Tho Commune). Poor households are those that live in poor housing conditions; have few productive and household assets; have children with very low levels of education; lack disposable income; are frequently ill with sick household members; and have large families (many children). The proportion of poor households was considered higher in upland ethnic minority Communes. Wealth Ranking will be expanded by RUDEP to cover all households in RUDEP Communes and facilitate the participation of poor households in VSCFs and RUDEP activities.

The PRA exercises have provided a foundation for RUDEP to facilitate the application of participatory planning activities. The analysed results of these exercises were fed back to households at Village Planning Meetings. It is anticipated that these PRA exercises will provide a foundation for RUDEP activities to respond to needs of the poor and will continue to involve them in planning, monitoring and evaluation of RUDEP activities.

\(^2\) Lunar New Year
1 Introduction

RUDEP is a 10-year poverty reduction and rural development initiative funded by the Australian and Vietnamese Governments that aims to generate income for poor households in Quang Ngai Province. Participatory planning processes (PPP) are a foundation for implementing RUDEP activities and involve the active participation of poor households. Ultimately, PPP activities implemented by RUDEP identify problems faced by poor rural households and involve these households in developing and implementing activities to overcome these problems.

PRA exercises are considered an important PPP tool that encourages households to identify, plan, implement and evaluate activities. Competency profile assessments of RUDEP staff identified PRA as being an important skill that staff, particularly DDOs, should possess and would improve the ability to service the needs of households and facilitate PPP. Consequently, training on PRA was undertaken and included facilitation skills, conducting different exercises and analysing results.

The improved skill levels of RUDEP staff allowed the Program to conduct PRA exercises in all Communes. In Cycle 1 and Cycle 2 Communes where Program activities are currently being implemented, these exercises were conducted to facilitate a greater understanding of household resources, farming systems, production problems and opportunities. In Cycle 3 Communes, PRA exercises were the first main activity undertaken and allow RUDEP to have in-depth knowledge of local conditions, household resources, farming systems, production problems and opportunities prior to implementing any activities.

This report details the analysis of the results of the following PRA exercises:

- Historical timeline analysis;
- Village mapping exercises;
- Transect walks;
- Seasonal calendars;
- Matrix Scoring and Ranking exercises;
- Linkage diagrams;
- Wealth ranking;
- Venn diagrams; and
- Focus group discussions.

The main findings, comparisons between different Communes and the implications of the results to RUDEP are highlighted. The analysed PRA results were importantly fed back to households while conducting RUDEP’s Village Planning Meetings. PRA exercises will continue to be used by RUDEP as a planning, monitoring and evaluation tool to support PPP.

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3 Tinh Tho Commune (Son Tinh District); Hanh Phuoc Commune (Nghia Hanh District); Pho Chau Commune (Duc Pho District); Duc Phong Commune (Mo Duc District); and, Nghia Tho Commune (Tu Nghia District).

4 Son Trung Commune (Son Ha District); Son Giang District (Son Ha District); and, Binh Minh Commune (Binh Son District).
2 PRA Tools and Methodology

2.1 PRA Training Course

PRA tools, techniques and methodology were initially identified by RUDEP and World Vision Viet Nam; contracted to provide a PRA Training Course. Training was provided over a 3-day period in November 2003 involving the combination of theoretical lessons, practical exercises and pilot PRA activities in a selected RUDEP Commune (Hanh Phuoc Commune). The nine PRA tools were initially identified based on their suitability to RUDEP activities and their support to involving households in planning, implementing, monitoring and evaluating activities. The final day of the PRA Training Course was conducted in Hanh Phuoc Commune and all participants were involved in conducting PRA exercises with households.

2.2 PRA Manual

A RUDEP PRA Manual was developed following the completion of the PRA Training Course. The Manual incorporated PRA tools and techniques outlined in ‘Developing Agricultural Solutions with Smallholder Farmers: How to get Started with Participatory Approaches’. The finalised ‘RUDEP PRA Manual’ incorporates theoretical techniques and methodologies with practical experiences and approaches to support various activities involving households. The finalised RUDEP PRA Manual allows RUDEP staff and Government Departments with a reference tool that complements the practical application of PRA tools.

2.3 PRA Tools

This report highlights the nine PRA tools that have different uses and applications.

2.3.1 Historical Calendars

Historical timeline exercises are conducted to highlight trends and key points in the history of the Commune or Village that households considered had an impact on their livelihoods – either positively or negatively.

2.3.2 Village Mapping

Village mapping is a PRA tool used to facilitate understanding and discussion on local farming systems, physical resources/features and infrastructure considered important by households.

2.3.3 Transect Walks

Transect walks are a PRA tool used to develop familiarity with local farming systems, local geography, natural resources, production problems and opportunities to overcome such problems. Transect walks facilitate the opportunity and households to view, discuss and compare local resources between areas and between the past, present and different seasons.

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2.3.4 Seasonal Calendars
Seasonal calendars are developed to illustrate important activities, problems or resource changes throughout a calendar year or production cycle. They can investigate community-based activities, livestock production, cropping and cultivation, weather and climatic conditions, and expenditure and borrowing.

2.3.5 Linkage Diagrams
Linkage diagrams are used to investigate local farming systems. They determine the main crop and livestock varieties cultivated and raised, sources of inputs, sale of products and the uses of by-products. Linkage diagrams can identify under-utilised resources and assist farmers to propose solutions to improve local farming systems.

2.3.6 Matrix Scoring and Ranking
Matrix scoring and ranking is a PRA tool that allows households to identify activities most preferred by households and why particular activities are preferred. This particular exercise is also used as a planning tool (e.g. to identify crops or livestock that households wish to cultivate and why). In addition, matrix scoring and ranking is also used effectively to evaluate household perceptions on a technology or activity.

2.3.7 Wealth Ranking
Wealth ranking is conducted to allow households to define differing levels of wealth in a Commune and the households that belong to a particular class of wealth. The characteristics of each class of wealth are defined. The results of wealth ranking exercises facilitate an understanding of the characteristics and resources of households of a particular wealth class, particularly the poor.

2.3.8 Venn Diagrams
Venn diagrams are a tool used to investigate linkages, relationships and interactions between differing groups of households, institutions or community groups. The Venn Diagram exercise allows participants to raise any conflicts, their causes and discuss options on how to resolve these issues.

2.3.9 Focus Group Discussions
Focus group discussions facilitate discussion on a particular problem or development topic. The discussions ultimately encourage households to propose solutions to these issues.

2.4 Commune PRA Reports
The results of the PRA exercises were analysed and compiled into individual Commune PRA reports. These Commune reports identify problems and opportunities raised by households through the exercises. The analysed results were presented to households at Village Planning Meetings and Commune People’s Committees, District People’s Committees and Provincial Departments with implications for RUDEP activities discussed.
3 Results of PRA Exercises in RUDEP Communes

This Report compiles the analysed results from the PRA exercises conducted in all RUDEP Communes. The report highlights the main findings, comparisons between different Communes and the implications of the results to RUDEP. These results are drawn from individual Commune PRA Reports.

3.1 Historical Timelines

Historical calendar exercises were conducted in 4 RUDEP Communes: Tinh Tho Commune, Binh Minh Commune; Son Trung Commune; and, Nghia Tho Commune. The results of the Historical Timelines revealed:

Trends in History
- Natural disasters (floods and droughts) had a considerable impact on people’s livelihoods in all Communes. Floods and droughts damaged agriculture, destroyed household assets and damaged Commune infrastructure. Many RUDEP Communes are highly susceptible to flash flooding.
- Livestock diseases and epidemics occurred at various times throughout Commune history. They resulted in massive livestock losses (sometimes all buffaloes or cattle), and reduced income and available draught power.
- Lack of food security affected households throughout history. A lack of food security was most prevalent following the American War and occurred following the War in association with prolonged droughts or damage to crops; this indicates a limited resilience of households to cope with acute shocks (e.g. extreme weather events).

Key Points in History
- The end of the American War allowed households to resettle and reside safely in their Commune. The war period was difficult with many Communes and households involved in the resistance battle.
- Improved health services, through vaccination/health campaigns or the construction of a Commune Health Centre, improved the health status of people and reduce child mortality.
- Electricity connection allowed households to access information through radios and television. The electricity also supported Commune People’s Committees with radios and facilitated the exchange of information to households.
- ‘Renovation policies’ implemented by the Government (through the Doi Moi Economic Reforms) resulted in the equitable allocation of land and the dissolving of cooperatives. These renovation policies improved the livelihoods, income and living conditions of households.
- The flood of 1999 was raised in all lowland Communes and considered the most serious flood to hit Quang Ngai Province. Households were affected either through loss of life, death of livestock or the destruction of crops.

Households in RUDEP Communes are susceptible to natural disasters. Many of these Communes are situated in close proximity to the main rivers (Tra Bong River and Ve River) leaving households and agricultural systems vulnerable to flash flooding. Flooding will continue to be a problem facing many households. Opportunities exist for RUDEP to
support households vulnerable to floods with Livelihood Projects. The projects provide an avenue for households to develop flood mitigation, coping and rehabilitation activities that increase their resilience to overcoming damage caused by severe flooding.

The end of the American War led to an improvement in livelihoods with many households returning to their Commune to permanently reside. However, life was still considered difficult. Policies and programs associated with the Doi Moi Economic Reforms had a positive impact on improving livelihoods, increasing food security and the creation of more favourable equity between households. As Vietnam continues to develop its economy, further market-oriented polices and programs will continue to be developed and implemented (e.g. Comprehensive Poverty Reduction and Growth Strategy [CPRGS]). It is essential that RUDEP is aware of Central Government policies and programs that facilitate the empowerment of rural households and supports their implementation in Quang Ngai Province and Program Communes and Districts.
4 Village Mapping

Village mapping exercises were conducted in Hanh Phuoc and Tinh Tho Communes. The majority of households in these locations generate income through agricultural production. Both lowland Communes and Villages are linked by the Thach Nham Irrigation Scheme. The Irrigation Scheme provides sufficient water to allow for 2 crops of rice production per year. Two-crop rice production is promoted by the Provincial Department of Agriculture and Rural Development to reduce vulnerability to floods and disease/pest infestations.

Unused ‘hill’ land was identified in Tinh Tho Commune. This land is currently not used to its maximum potential and opportunities exist for RUDEP to support the introduction of forestry or fruit crop varieties. The Agricultural Cooperative in Tinh Tho Commune has plans to develop this land and introduce new fruit varieties. RUDEP could support such an initiative with training and demonstration activities in order to utilise the land more sustainably and efficiently.
5 Transect Walks

Transect walks were conducted in Son Trung and Hanh Phuoc Communes. The following issues and opportunities were identified:

- ‘Bare hills’ exist in both Communes with this land currently not utilised to its maximum potential. Households identified forestry, fruit and agro-forestry systems as suitable activities to utilise this land more effectively and sustainably.

- Problems with rice cultivation were identified in Son Trung Commune. Households lack sufficient funds and knowledge to control pests and diseases. Rice cultivation is also affected by a lack of irrigation; all paddy is rain-fed.

- Rice cultivation in Hanh Phuoc Commune is irrigated; however crops are susceptible to flood damage during the typhoon season.

Unused and available land was identified in both Communes. Some forest varieties are cultivated in these hill areas (mainly Eucalypts) with the land not currently used sustainably or to its maximum potential. Opportunities exist for RUDEP to introduce sustainable long-term forestry and agro-forestry technologies and demonstrations. Where possible, supporting CPCs to allocate land to households, through land ownership certificates (‘Red Books’), will need to be pursued.

Households in Hanh Phuoc Commune proposed the introduction of new rice varieties (high yield and short cropping duration) to reduce vulnerability to flood damage. Rice cropping in Son Trung Commune will be supported by an irrigation canal funded under the Community Based Rural Infrastructure Project (CBRIP). This will lead to more intensified rice cropping systems in both Communes. The introduction of rice cultivation and IPM technologies is recommended, particularly in Son Trung Commune where diseases and pest commonly affect rice crops. Such technologies will increase rice yields, reduce input costs and increase potential profit.
6 Venn Diagrams

Venn Diagram exercises were conducted in Son Trung and Hanh Phuoc Communes. Son Trung Commune is predominantly inhabited by the H’re ethnic minority with Kinh Vietnamese making up a very small proportion of the population. This exercise revealed some issues arising between the H’re and Kinh Vietnamese:

- The H’re Vietnamese have difficulties in selling agricultural products and accessing markets. They largely sell directly to Kinh Vietnamese and lack bargaining power due to limited functional literacy/numeracy and Kinh Vietnamese language skills.

- The opinions of rich households are considered more influential than those of poor households. Rich typically own a lot of land or are CPC members. Poor households participate less in community activities because of illness, sick household members and caring for many children.

The Venn Diagram exercise in Son Trung Commune identified some difficulties facing the H’re ethnic minority related to the marketing and selling of agricultural products. Compounding the problem is poverty, illiteracy and poor Kinh Vietnamese language skills. Poor language and literacy skills make receiving and understanding information difficult. Poverty and language skills create difficulties to access markets outside the Commune. Activities to support increased marketing power of the H’re through study tours, functional literacy and numeracy skills and incorporating marketing into demonstration activities are strongly justified and warranted.

Despite these difficulties, respect is given to traditional H’re beliefs, customs and the language. In addition, the H’re explained that they are well supported by the Commune People’s Committees, Mass Movements and development projects (Program 135, CBRIP and RUDEP). The important role that these agencies play in involving households in Commune activities was reflected in the Venn Diagram exercise.
7  Seasonal Calendars

Seasonal calendar exercises were conducted in Tinh Tho, Hanh Phuoc, Binh Minh, Son Giang, Nghia Tho and Son Trung Communes. Livestock production, rice cultivation, borrowing and expenditure, and weather and influences were all analysed in different Communes using PRA Seasonal Calendar exercises.

7.1 Rice Cultivation

Seasonal calendars for rice cultivation were conducted in all 6 Communes. The results of the rice cultivation seasonal calendar exercises revealed that:

• Many households face problems with pests and diseases throughout the calendar year:
  - Disease and pest is more common in upland ethnic minority Communes than lowland Communes;
  - 3-crop rice production systems are more susceptible to diseases and pests than 2-crop rice production systems; and
  - Households faces difficulties in controlling and preventing disease and pests, especially in upland Communes.

• Irrigation systems have an impact on increasing rice yields and reducing production vulnerability:
  - Upland Communes largely have rain-fed irrigation systems whilst lowland Communes are commonly supported by the Thach Nham Irrigation Scheme.
  - Rice yields are generally higher in lowland Communes than upland ethnic minority Communes.

Opportunities exist for RUDEP to support households with rice cultivation and IPM technologies to reduce disease incidence. Such activities will be necessary as rice cultivation intensifies, particularly in upland Communes as supporting infrastructure is built (e.g. irrigation canals). In most upland Communes, any activity that increases rice yields will support food security for households and provide a stable source of income for households.

7.2 Livestock Production

Seasonal calendar exercises for livestock production were conducted in all 6 Communes. The results of the exercises revealed that:

• Diseases are common in all livestock varieties in all Communes:
  - Pasteurellosis, diarrhoea and other diseases occur in cattle and buffaloes from September to December.
  - Deaths of chickens (and sometimes ducks) due to Newcastle Disease (chickens) and Fowl Cholera is common in the summer months (May to September).
  - Pigs suffer hog cholera, Pasteurellosis and diarrhoea/constipation commonly from September to February.

• Peak purchase and selling times vary between Communes:
In lowland Communes, livestock are commonly sold shortly before the Tet Holiday when prices are high and purchased at the beginning of the calendar year shortly after the Tet Holiday period.

In upland Communes, livestock are sold when household require funds for emergencies, schooling, food or other miscellaneous expenses.

Diseases are a common problem facing livestock producing households in RUDEP Communes. Common diseases were identified across all Communes largely occurring at similar times throughout the calendar year. RUDEP can support households with animal health training, vaccination technologies and awareness raising activities that will contribute to reducing the incidence of these diseases. This approach is currently being supported through animal health training provided by the Sub-Department of Animal Health for VSCF members in RUDEP Communes. Seasonal livestock production calendars will be used as a foundation for the training content.

7.3 Borrowing and Expenditure
Seasonal borrowing and expenditure calendar exercises were conducted in Binh Minh, Nghia Tho, Son Giang and Tinh Tho Communes. The results of the exercises revealed that:

- Peak expenditure is commonly associated with Lunar Calendar Holidays (mainly the Tet New Year Holiday).

- Borrowing of funds is common for production, consumption and education expenses:
  - Money is commonly borrowed by households following the Tet New Year period for production purposes and expenses;
  - Some households, particularly the poor, borrow money to cover children’s education expenses; and
  - In some lowland Communes, funds can be borrowed from the Institutional Banks (e.g. VBARD) or Mass Movements (e.g. Women’s Union).

- Borrowing of food at varying times throughout the calendar year is common in upland ethnic minority Communes.

Opportunities exist for RUDEP’s VSCFs to support the local demand for credit in these Communes. Funds can be borrowed to cover short-term or longer-term production loans. This will reduce the reliance on high-interest input or monetary loans currently taken by many households. In addition, VSCFs provide an avenue for households to deposit savings that can be withdrawn to cover miscellaneous expenses (e.g. education or food).

Borrowing of food in upland Communes highlights a lack of food security facing many households. RUDEP’s income generating activities need to increase available food for households whilst providing a source of income. Home gardens and semi-scavenging chicken production are potential activities that will support this approach. Borrowing food raises the concern that child malnutrition and nutritional health problems have a high prevalence in upland Communes. RUDEP’s Livelihood Projects provide the opportunity to support appropriate food security activities (home gardens and semi-scavenging chicken production) with child malnutrition and health promotion programs. Many Communes have incorporated such activities in their RUDEP Commune Plans and these activities will be implemented in 2004/2005.
7.4 Weather and Influences

The Seasonal Weather and Influences Calendars were conducted in Son Giang, Nghia Tho and Hanh Phuoc Communes. The results revealed that:

- Flooding associated with typhoons and tropical depressions are common from September to December.
- Droughts in summer are common from June to August.

Son Giang, Nghia and Hanh Phuoc Communes are situated close to large rivers. Consequently, many households and agricultural land are susceptible to flash flooding. Conversely, summer leaves many household with cropping difficulties due to a lack of water to irrigate crops. This problem is most prevalent in upland Communes where only rain-fed rice production exists. Livelihood Projects and Activity Group Implemented Trials (AGITs) provide the opportunity for households to reduce their vulnerability to these annual weather phenomena. Livelihood Projects support households to develop community flood mitigation, coping and rehabilitation activities to reduce their vulnerability to future flooding. AGITs can allow drought-prone households to trial the adaptability of drought-resistant crop varieties to cultivate in summer.
8 Matrix Scoring and Ranking

Matrix Scoring and Ranking exercises were conducted for livestock and crop varieties in Nghia Tho, Hanh Phuoc and Tinh Tho Communes. These exercises were conducted to score and rank different livestock and crop varieties against a range of criteria.

8.1 Crop Varieties

The results of cropping Matrix Scoring and Ranking Exercises revealed that:

- Cassava is the most preferred crop variety in most Communes because it is easy to plant, has few pests and requires little pesticide, obtains a high profit and is easy to sell.
- The least preferred crop variety varies between Communes with watermelon, vegetables and rice commonly ranked low.

Cassava production is well supported in Quang Ngai Province through the presence of processing factories and many traders/buyers. Consequently, this allows households to sell the commodity easily and obtain a high profit with little labour or inputs required for production. Conversely, vegetables (e.g. chilli and cucumber) are also sold in local markets but are difficult to sell, obtain a low profit whilst being susceptible to diseases and pests. Marketing and the sale of crops was identified as an issue facing households with many crop products. RUDEP’s approach to incorporate marketing technologies and the introduction of markets to households into demonstration activities is justified and further expansion is required.

8.1.1 Livestock Varieties

The results of the Livestock Matrix Scoring and Ranking Exercises revealed that:

- Cattle and buffaloes are the most preferred livestock variety. They are easy to raise, have few diseases, obtain a high profit, and utilise agricultural by-products.
- Pigs are less preferred than cattle because they are susceptible to diseases, are rather difficult to sell, and require relatively high labour inputs.
- Chickens and ducks are the least preferred livestock variety to raise. They require high labour inputs (ducks), are highly susceptible to diseases, obtain a low profit and are sometimes difficult to sell.

Marketing and the sale of animals was also identified as problem in these exercises. Many of the livestock varieties scored and ranked are difficult to sell and the potential profit varies between Communes. RUDEP currently incorporates marketing issues into livestock demonstration activities. These marketing components need to be expanded and support households to identify potential markets (for inputs and selling) to increase their level of market power and contribute to obtaining higher profit and income levels.
9 Linkage Diagrams

Linkage Diagrams were conducted in Son Trung, Hanh Phuoc and Tinh Tho Communes to identify household and farming system resource flows. These exercises revealed that the utilisation of agricultural, livestock and household by-products is common in lowland Communes. In comparison, little utilisation of by-products is apparent in upland Communes. For example, the drying and stacking of rice straw is rarely practiced by upland ethnic minority households. In addition, manure of livestock is rarely used as fertiliser for paddy production because cattle are not kept in sheds.

The introduction of agro-processing technologies is recommended to better utilise existing by-products. RUDEP is currently incorporating agro-processing and post-harvest technologies into income generating activities. Upland Communes could benefit from the introduction of simple demonstration activities aimed at increasing the use of available by-products (e.g. rice stacking demonstrations) and storage equipment to reduce post-harvest losses.
10 Wealth Ranking Exercises

Wealth ranking exercises were conducted in all RUDEP Communes. A total of 6,194 households were ranked in the exercises. Three general classes of wealth/well-being were identified: rich; medium; and poor. Table 1 demonstrates that of the 6,194 households ranked 653 households were considered rich (11%), 2,756 were considered medium (44%) and 2,785 were considered poor (45%). The proportion of households identified as poor through wealth ranking exercises varied from 26% in Duc Phong Commune to 73% in Son Giang Commune. Wealth ranking estimates of poverty for each Commune, except Nghia Tho Commune, were higher than the Commune DOLISA poor household lists.

Table 1: Results of Wealth Ranking Exercises in RUDEP Communes

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<td></td>
<td></td>
</tr>
<tr>
<td>Hanh Phuoc Commune</td>
<td>284</td>
<td>675</td>
<td>426</td>
</tr>
<tr>
<td>Tinh Tho Commune</td>
<td>13</td>
<td>267</td>
<td>264</td>
</tr>
<tr>
<td>Pho Chau Commune</td>
<td>41</td>
<td>290</td>
<td>245</td>
</tr>
<tr>
<td>Duc Phong Commune</td>
<td>35</td>
<td>364</td>
<td>134</td>
</tr>
<tr>
<td>Binh Minh Commune</td>
<td>106</td>
<td>663</td>
<td>609</td>
</tr>
<tr>
<td>Upland Communes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nghia Tho Commune</td>
<td>11</td>
<td>27</td>
<td>49</td>
</tr>
<tr>
<td>Son Hai Commune</td>
<td>39</td>
<td>67</td>
<td>73</td>
</tr>
<tr>
<td>Son Trung Commune</td>
<td>47</td>
<td>227</td>
<td>295</td>
</tr>
<tr>
<td>Son Giang Commune</td>
<td>77</td>
<td>176</td>
<td>690</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>653 HHs (11%)</td>
<td>2,756 HHs (44%)</td>
<td>2,785 HHs (45%)</td>
</tr>
</tbody>
</table>

⁶ Based on 2003 Commune DOLISA lists of poor households and DOLISA definitions of poor households. Poor households are those earning less that 100,000 VND per household member per month in lowland Communes and earning less that 80,000 VND per household member per month in upland Communes.
Table 2 demonstrates that poor households are those that:

- Live in poor housing conditions (commonly thatched houses);
- Have few productive and household assets (e.g. no motorbike and very few livestock numbers);
- Have children with very low levels of education (e.g. Primary School) or no education;
- Lack disposable income;
- Are frequently ill with sick household members; and
- Have large families (many children).

Households considered being of ‘medium’ levels of wealth/well-being also live in difficult circumstances. These households rely on livestock production for income, may or may not have some disposable household income available and have children with very low levels of education (e.g. up to Secondary School).

Table 2: Characteristics of Wealth/Well-Being in RUDEP Communes

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Rich</th>
<th>Medium</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>Large house</td>
<td>Grade 4 house(^7)</td>
<td>Poor quality house (thatched with mud walls)</td>
</tr>
<tr>
<td></td>
<td>Good quality (often many storeys)</td>
<td>House with a tiled roof</td>
<td>Some have no house</td>
</tr>
<tr>
<td>Household Assets</td>
<td>Many assets</td>
<td>Some household assets</td>
<td>Few, if any, HH assets</td>
</tr>
<tr>
<td></td>
<td>Good HH facilities</td>
<td>Average HH facilities</td>
<td></td>
</tr>
<tr>
<td>Productive Assets</td>
<td>Many productive assets</td>
<td>Some productive assets</td>
<td>Few, if any, productive assets</td>
</tr>
<tr>
<td></td>
<td>Large agricultural land</td>
<td>Little agricultural land</td>
<td>Very little, if any, agricultural land</td>
</tr>
<tr>
<td></td>
<td>Many livestock</td>
<td>Some livestock</td>
<td>Few, if any, livestock</td>
</tr>
<tr>
<td>Income Source</td>
<td>Largely through off-farm sources (e.g.</td>
<td>Primarily from agriculture</td>
<td>Primarily from agriculture</td>
</tr>
<tr>
<td></td>
<td>businesses, jobs</td>
<td>Work as labour</td>
<td>Rely on Government support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Migrate to HCMC</td>
<td>Migrate to HCMC</td>
</tr>
<tr>
<td>Income Level and</td>
<td>High income</td>
<td>Low income</td>
<td>Little or no income</td>
</tr>
<tr>
<td>Stability</td>
<td>Stable income</td>
<td>Unstable income</td>
<td>Unstable income</td>
</tr>
<tr>
<td>Disposable Income</td>
<td>Have disposable income</td>
<td>Often lack disposable income</td>
<td>Lack disposable income</td>
</tr>
</tbody>
</table>

\(^7\) Single storey house with brick (mortared) walls with a roof (tiled or metal sheets).
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Rich</th>
<th>Medium</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children’s Education</td>
<td>High levels of Education (e.g. University)</td>
<td>Senior Secondary School University (sometimes) Much HH income spent on children’s education</td>
<td>Junior Secondary School Senior Secondary School Little ability to afford education</td>
</tr>
<tr>
<td>Use of Health Service</td>
<td>Use Provincial and District Health Services Sometimes go to HCMC if a serious health problem</td>
<td>Mainly Local (Commune) Health Services Local Health Workers Sometimes to District and Province if a serious health problem</td>
<td>Local (Commune) Health Services Local Health Workers</td>
</tr>
<tr>
<td>Health Problems</td>
<td>Few health problems Ability to afford treatment if necessary</td>
<td>Illness in HH members common</td>
<td>Frequent illness Have mentally handicapped or disabled HH members</td>
</tr>
</tbody>
</table>

Differences between poor households from lowland and upland ethnic minority Communes were noted. Paddy (or ownership of a rice paddy) is an important factor of wealth/well-being in upland ethnic minority Communes; households that do not own any rice paddy are considered poor. Poor households in upland ethnic minority Communes sell labour for food and income throughout the year. Upland ethnic minority poor also have much lower educational levels with no education at all (or up to Primary School). The level of food insecurity is also more severe in upland ethnic minority poor households.

Wealth ranking results will be used in Program Communes to identify and target poor households. The understanding of the characteristics and resource constraints of poor households will support RUDEP and Government authorities to design appropriate income generating and livelihood activities. Wealth ranking will also be used to identify poor households in order to actively encourage their participation in Program activities and VSCFs.
11 Focus Group Discussions

Focus Group Discussions were held in Tinh Tho and Nghia Tho Communes. In Tinh Tho Commune, these discussions focused on livelihood problems facing households. These discussions focused on general economic and production problems in Nghia Tho Commune.

Women in Tinh Tho Commune raised gynaecological infections and child malnutrition as livelihood issues facing poor households. Child malnutrition is believed due a lack of food security, food access and quality. Many households in the Commune are forced to eat cassava and sweet potato for some months of the year. Health problems are somewhat complicated by a lack of funds to afford treatment at the Commune Health Centre and households having little faith in local Health Workers. Village Planning Meetings identified child malnutrition and women’s reproductive tract infections and these have been included under the Livelihood component of the Tinh Tho Commune 2004/2005 plan.

A group of men and women in Nghia Tho Commune raised a range of production related issues that affect their household income. Rice production is hampered by degraded irrigation systems. This forces households to cultivate rice in periods when crops are vulnerable to flood and drought conditions. Livestock production is affected by diseases. Most household have little knowledge on the prevention of livestock diseases. This problem is compounded by no Commune paravet operating in Nghia Tho. Women play a leading role in livestock production and limited water sources increase labour requirements. Participants proposed mobile water pumps and animal health training for households to overcome these problems.
12 Conclusion and Main Findings

The results of the PRA exercises in RUDEP Communes identified issues and opportunities for the Program to support households to generate income, improve their livelihoods and facilitate participatory planning processes.

- Historical Timelines and Seasonal Calendars demonstrate that many households in RUDEP Communes are vulnerable to flooding and droughts. These weather conditions consequently affect agricultural production. RUDEP’s Livelihood Projects and AGITs will provide households with potential support, through flood vulnerability reduction activities or the trial of drought resistant varieties, to mitigate, cope and rehabilitate in the event of severe climatic events occurring.

- Households have a preference to raise large ruminants (cattle and buffalo); however Historical Timelines and Seasonal Calendars reveal that livestock diseases occur and persist at the common times throughout the year. Many households, particularly those living in upland ethnic minority Communes, have difficulties in preventing and controlling such diseases. Animal health training covering vaccination technologies and basic disease prevention is justified. RUDEP’s recently implemented VSCF animal health training activities will provide support to this household capacity building need.

- Rice cultivation is affected by diseases and pests. Upland ethnic minority Communes with rain-fed irrigation systems face higher incidences of disease. Rice cultivation will intensify as production as irrigation systems are built and available paddy land decreases. Rice cultivation and IPM technologies will increase in necessity to support increased yields, reduced inputs and contribute to increased household income.

- Wealth Ranking and Expenditure and Borrowing Calendars highlighted a lack of food security facing many households. It is highly probable that this is contributing factor to child malnutrition and related nutritional problems. RUDEP activities in food insecure locations will need to develop appropriate income generating and livelihood activities that support increased food availability, access and quality. Home gardens and semi-scavenging chicken production models, complemented with health programs, will support this approach.

- Wealth ranking results demonstrate that of the 6,194 households ranked, 2,785 households (45%) were considered poor. Wealth ranking estimates of poverty for each Commune, except Nghia Tho, were higher than the Commune DOLISA poor household lists. RUDEP will use these results to identify poor households, both DOLISA and Wealth Ranking poor, to encourage their active participation in Program activities and VSCFs. Expanding Wealth Ranking exercises to encompass all households RUDEP Communes is justified and will be conducted to facilitate access of poor households to participate in Activity Groups, VSCFs and participatory planning processes.

- PRA will continue to be used by RUDEP and Provincial and District Service Providers to incorporate into designing, planning, implementing, monitoring and evaluating income generating and livelihood activities. Further PRA training and capacity building on the use and application of PRA tools and the analysis of PRA results will be undertaken. Effort will be given to further incorporate gender roles, analysis and relationships in PRA exercises.

Results of the PRA exercises in RUDEP Communes have provided a foundation for understanding local farming systems and resources. PRA exercises will continue to be undertaken and used as a monitoring and evaluation tool by RUDEP.
Limitations

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