

QUANG NGAI RURAL DEVELOPMENT
PROGRAM (RUDEP) - PHASE 2

Pre and Post Course Competency Assessment
Report: *VSCF Animal Health Training*



VIETNAM-AUSTRALIA

Prepared for

AusAID

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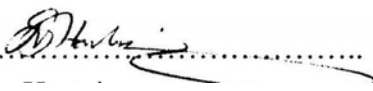
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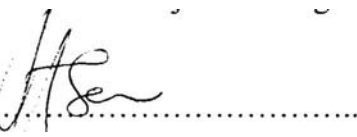
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Acronyms

AHS	District Animal Health Stations
HHs	Households
RUDEP	Quang Ngai Rural Development Program
SDAH	Sub-Department of Animal Health
VSCF	Village Credit and Savings Facilities

Summary

Cattle/buffalo, chicken and pig animal health training courses and technical materials were developed for households by RUDEP and the Quang Ngai SDAH. It was agreed that at least one training course (covering only one livestock variety) would be delivered to each of the 44 VSCFs currently operating in Cycle 1 and Cycle 2 RUDEP Communes in the second half of 2004. Pre- and post-course competency assessments were designed and used to measure levels of animal health competency *before* training and competency gains *after* training. The competency assessment results revealed that:

- 479 VSCF members undertook pre-course competency assessments (202 men and 277 women): 117 households (42%) were considered critical; 231 households (48%) were considered concern; and 45 households (9%) were consolidating. No households were considered competent. Importantly, there was no difference between men and women in their level of animal health competency prior to training.
- 1,063 VSCF members undertook post-course competency assessments (391 men and 672 women): 5 households (< 1%) were considered critical; 455 households (43%) were considered concern; 506 households (48%) were considered consolidating; and, 97 households (9%) were considered competent. No differences between men and women in post-course competency level or knowledge gains were found.
- An impressive competency gain was achieved as a result of the animal health training. VSCF members generally progressed on competency level (e.g. from 'concern' to 'consolidating' or from 'critical' to 'concern'). Despite these achievements, 500 households still remain at 'critical' or 'concern' levels of competency. Further analysis of the post-course competency assessment results needs to be conducted to identify specific problems or learning difficulties and incorporate recommendations to address such difficulties these activities in future animal health training courses.
- Pre-course assessments revealed that the level of competency of households in upland Communes (Son Hai and Nghia Tho Commune) is lower than lowland Communes. Similarly, post-course competency assessments revealed that households in upland Communes had lower levels of competency following training. Literacy and a lack of familiarity with Kinh Vietnamese language and technical terms may have been a contributing factor affecting the ability for ethnic minority households to understand course content. Future animal health training activities need to take this issue into account and design and deliver training courses more appropriate for poor ethnic minority households.

The Final Review Workshop needs to present these results and identify specific animal health problems that VSCF members still face. This would require a more detailed review of the post-course assessment results. A review of the training course outline, content, Farmer Animal Health Booklets and course duration needs to be undertaken. This Workshop should also discuss additional supporting activities that may be incorporated into future animal health training courses. Ex-post competency assessments should also be conducted to determine the level of knowledge retention and application of training technologies.

1 Introduction

Village Credit and Savings Facilities (VSCFs) are an important element of RUDEP's income generation component. VSCFs provide a local source of no-collateral loans for poor households to engage in income generating activities. Importantly, they also provide an avenue for households to deposit savings which are accumulated and available to cover emergency or miscellaneous household expenditures. Currently, RUDEP has 44 VSCFs in 6 Cycle 1 and 2 Communes¹ operating with more 60 percent of members being women.

The continued provision of technical support for income generating activities is a necessary activity to sustain VSCF operations and ensure that households obtain loans with minimal risk whilst generating higher levels of income. Monitoring of VSCF loan disbursement reveals that approximately 90 percent of loans are borrowed for livestock purposes (mainly cattle and pigs). RUDEP has supported these VSCFs with livestock raising demonstrations, training and study tours and introduced improved livestock raising technologies.

Given the high proportion of loans being disbursed for livestock production purposes, the provision of animal health training was considered an important training activity that would assist in reducing risks associated with livestock production, particularly diseases. RUDEP and the Quang Ngai Sub-Department of Animal Health (SDAH) consequently collaborated on developing training courses for poor rural households. Three such training courses and technical materials ('Farmer Animal Health Manuals') were developed with assistance from RUDEP's National Animal Health Training Advisor (Dr. Ta Ngoc Sinh):

- Cattle and buffaloes
- Pigs
- Chickens

A *Training-of-Trainers* course was held for Provincial and District SDAH officers to introduce the cattle/buffaloes, pig and chicken training outlines. Much emphasis of this training was given to increasing the training skills of Provincial SDAH and District Animal Health Station (AHS) officers through applying and practicing participatory training approaches. VSCFs were given a choice of the livestock variety that they would like to receive training on; either cattle/buffaloes, pigs or chickens. Only one livestock variety was allowed to be chosen.

In order to measure the effectiveness of training and the animal health competency levels of VSCF members, pre- and post-course competency assessment forms were developed. It was anticipated that the results of pre- and post-course assessment would assist in improving future animal health training activities. This Report highlights an analysis of the pre- and post-course competency results, identified issues and provides recommendations for future animal health training activities.

¹ Cycle 1 Communes: Duc Phong Commune (Mo Duc District); Tinh Tho Commune (Son Tinh District); and Son Hai Commune (Son Ha District). Cycle 2 Communes: Hanh Phuoc Commune (Nghia Hanh District); Pho Chau Commune (Duc Pho District); and Nghia Tho Commune (Tu Nghia District).

2 VSCF Animal Health Training Implementation

2.1 Training Course Outline and Content

The Farmer Animal Health Training Courses were supported with two main activities involving the Provincial SDAH and District AHS officers: preparation of training content, materials and training methodology; and, the drafting of technical materials ('Farmer Animal Health Booklets'). It was agreed between RUDEP and SDAH that the focus of the training would be on prevention rather than treatment. Given this approach, emphasis of the training was on basic animal health principles, livestock husbandry, understanding and recognising common diseases and the application of vaccines to prevent epidemic diseases.

Introductory Meetings were held with each VSCF with the training outline explained and the livestock variety that they wished to receive training on chosen. The training course involved 5 half-day sessions implemented over a series of weeks. Training was delivered by one Provincial SDAH officer and one District AHS officer. Training dates and times were decided between the trainers and VSCF members.

2.2 VSCF Locations and Livestock Varieties

Table 1 highlights the VSCF locations (per Commune) and the compiled animal health training requests and courses. Pigs were the preferred livestock variety with 28 VSCFs requesting pig animal health training. A total of 16 VSCFs from 3 Communes (Son Hai, Tinh Tho and Duc Phong Communes) requested cattle/buffaloes. The two VSCFs located in Nghia Tho Commune requested training on pigs and chickens.

Table 1: VSCFs locations and livestock variety training requests

Commune	Livestock Variety			
	Cattle/Bufaloes	Pigs	Chickens	Total
Son Hai	6 VSCFs	-	-	6 VSCFs
Hanh Phuoc	-	9 VSCFs	-	9 VSCFs
Pho Chau	-	7 VSCFs	-	7 VSCFs
Tinh Tho	5 VSCFs	5 VSCFs	-	10 VSCFs
Duc Phong	5 VSCFs	5 VSCFs	-	10 VSCFs
Nghia Tho ²	-	2 VSCFs	2 VSCFs	2 VSCFs
	16 VSCFs	28 VSCFs	2 VSCFs	44 VSCFs

² Two VSCFs operated in Nghia Tho Commune in 2004. It was agreed that two animal health training courses would be given to each VSCF because there is no paravet currently operating in the Commune and households face many animal health difficulties.

2.3 Level of Participation in Farmer Animal Health Training Courses

Levels of participation at the animal health training events were generally high and above 84%. A total of 6,113 HHs attended 274 training sessions (90% attendance). The proportion of households attending the training events is illustrated in Table 2.

Table 2: Training courses and levels of participation in VSCF animal health training

Commune	No. of VSCFS	No. of Training Events ³	No. of VSCF Members	Assumed Attendance (Total) ⁴	Actual Attendance (Total)	Actual Attendance (%)
Son Hai	6	36	114	684	624	91%
Hanh Phuoc	9	54	217	1,302	1,106	85%
Pho Chau	7	42	185	1,110	930	84%
Tinh Tho	10	60	244	1,464	1,384	92%
Duc Phong	10	60	274	1,644	1,544	94%
Nghia Tho	2	22 ⁵	55	605	561	93%
Total	44 VSCFs	274 Training Sessions	1,089 VSCF Members	6,809 HHs	6,113 HHs	90% Attendance

A probable factor contributing to this high level of attendance was the drafting and agreeing to a training schedule between the VSCF members themselves with the SDAH trainers. This reduced the need for invitations to be sent to households and resulted in higher levels of participation. It is hoped that such an approach to drafting training schedules and dates will be adopted by other agencies involved in training and extension activities for households in RUDEP Communes.

3 Pre and Post Course Competency Assessments

Measuring levels of competency before and after training courses allows RUDEP and SDAH/AHS trainers to identify knowledge (competency) gains as a result of training events. Pre-course evaluations are given to trainees prior to any RUDEP training course to test levels of competency prior to training. These competencies are determined by identifying the level of skills and knowledge considered necessary for a trainee to be competent. The pre-course competency assessment identifies knowledge gaps and identifies training needs. Training is then delivered that targets these training needs. Post-course assessments are conducted upon the completion of the training course to test levels of competency following training and capacity gains as a result of training.

³ Including 1 Introductory Meeting and 5 *half-day* training sessions for each VSCF.

⁴ Assuming 100% attendance of households at all training sessions.

⁵ Including 1 Introductory Meeting and 10 *half-day* training sessions (2 livestock varieties) for each VSCF.

3.1 Pre and Post Course Assessment Forms

Two different pre-course assessment forms and two different post-course assessment forms were designed:

- Each form contained 10 multiple choice questions containing 4 possible answers (A, B, C or D) with only 1 answer being correct.
- Talking or communicating between trainees during the pre- and post-course assessments was discouraged and not allowed.
- Participants that could not understand the questions or had limited literacy skills were assisted by SDAH trainers who read and went through the form with them.
- A maximum time limit of 15 minutes was applied for households to complete the pre- and post-course assessment forms.

The name and sex of each trainee was recorded on each form. Completed forms were collected by SDAH trainers for recording and analysis. The pre-course competency assessment forms were delivered at either the Introductory Meeting or the first training session. The post-course competency assessment form was delivered upon the completion of the final training session.

3.2 Levels of Competency

The results of the pre- and post-course competency assessments were analysed according to 4 levels typically applied by RUDEP (Table 3).

Table 3: Assessment used to measure levels of competency

Level of Competency	Results (Percentage)	Results (Marks)
Critical	0 – 33%	0 -3 marks
Concern	34 – 66%	4 – 6 marks
Consolidating	67 – 95%	7 – 9 marks
Competent	> 95%	10 marks

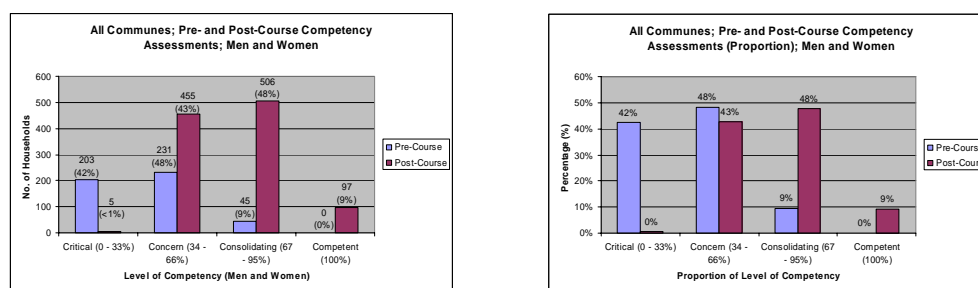
4 Results of Pre and Post Course Competency Assessments

A total of 479 trainees (VSCF members) undertook pre-course assessments (202 men and 277 women) and 1,063 trainees (VSCF members) undertook post-course assessments (391 males and 672 females). The number of pre-course assessments conducted was lower because in many instances the Introductory Meetings and training started before the pre- and post-course competency assessment forms were ready. Almost all trainees (VSCF members) completed post-course competency assessment forms. The results of the pre- and post-course competency assessments are presented in Table 4 and Figure 1.

Table 4: Results of pre and post course competency assessments; all communes

Pre- and Post-Course Evaluation Results						
Level of Competency	Pre-Course Evaluations			Post-Course Evaluations		
Level of Competency	Male	Female	Total	Male	Female	Total
Critical (0 - 33%)	86	117	203	2	3	5
Concern (34 – 66%)	94	137	231	163	292	455
Consolidating (67 – 95%)	22	23	45	197	309	506
Competent (100%)	0	0	0	29	68	97
Total (No. of Trainees)	202	277	479	391	672	1063
Critical (0 - 33%)	43%	42%	42%	1%	0%	0%
Concern (34 – 66%)	47%	49%	48%	42%	43%	43%
Consolidating (67 – 95%)	11%	8%	9%	50%	46%	48%
Competent (100%)	0%	0%	0%	7%	10%	9%

Figure 1: Pre and post course competency assessments; all communes



4.1 Results of Pre Course Assessments

Pre-course assessments demonstrated poor knowledge of basic animal health, recognising signs of disease in animals and vaccinations to prevent epidemic diseases. Of the 479 households that completed pre-course competency assessments:

- 203 households (42 percent) were considered as having critical levels of competency (0 – 33% of questions correct; 0 – 3 marks).
- 231 households (48%) were considered as having a concern level of competency (34 – 66% of questions correct; 4 – 6 marks).
- Only 45 households (9%) were considered consolidating (67 – 95% of questions correct; 7 – 9 marks).

Of the 277 women that undertook pre-course competency assessment, 117 (42%) were critical, 137 (49%) were concern, and 23 (8%) were consolidating. Little difference in the levels of animal health knowledge of men was found during pre-course assessments; 86 (43%) were critical, 94 (47%) were concern and 22 (11%) were consolidating. No women or men were considered competent prior to the animal health training course. This comparison highlights little difference in the animal health knowledge of men and women in RUDEP Communes.

Post-course competency assessment differences were noted between Communes. In some Communes, the level of competency gain was relatively high (e.g. Pho Chau Commune with more than 87% of households being at a consolidating or competent level of competence following training). In other Communes, the level of competency gain was surprisingly low (e.g. Tinh Tho Commune with 72% of households still remaining at concern levels of competency after the training course). These differences in competency level gains may be explained by two important factors: the trainers and the training approaches and delivery may have differed between Provincial SDAH and District AHS officers in different Communes; and, levels of household participation in all training sessions and courses (infrequent participation will reduce the post-course competency level of trainees). Further discussion on the reasons for these differences will be undertaken with specific reasons for the differences highlighted and addressed.

4.2 Results of Post Course Assessments

Pre-course assessments demonstrated an impressive increase in knowledge and competency levels. Of the 1,063 households that completed post-course competency assessments:

- Only 5 households (< 1%) were considered critical.
- 455 households (43%) were still considered critical.
- 506 households (48%) were considered consolidating.
- 97 households (9%) were considered competent.

This demonstrated an impressive increase in the level of competency of households that participated in the livestock animal health training courses. Similar to the pre-course competency assessments, no differences were noted in the competency levels of men and women.

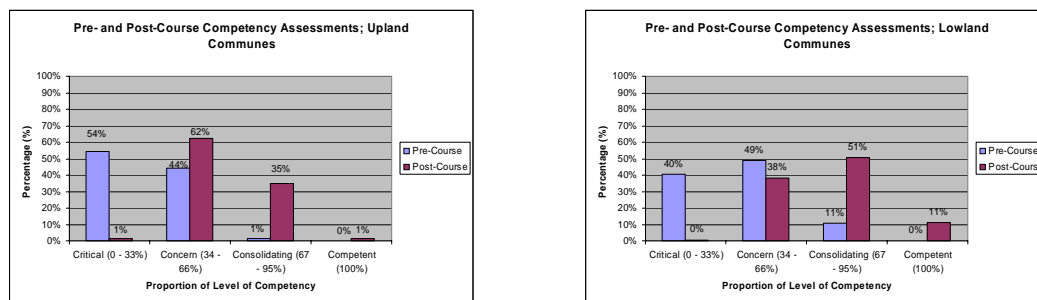
4.3 Comparisons of Pre and Post Course Competency Assessments between Upland and Lowland Communes

A total of 70 households conducted pre-course competency assessments in upland Communes (Son Hai and Nghia Tho Communes) compared to 409 households in upland Communes (Duc Phong, Hanh Phuoc, Nghia Tho and Pho Chau Communes). Pre-course competency assessment comparisons revealed that upland Communes had generally lower competency levels than lowland Communes:

- Critical: 58% of men and 50% of women (59 % in total) in upland Communes and 39% of men and 41% of women (40% in total) in lowland Communes.
- Concern: 39% of men and 50% of women (44% in total) in upland Communes and 48% of men and 49% of women (49% in total) in lowland Communes.
- Consolidating: 3% of men and 0% of women (1% in total) in upland Communes and 13% of men and 9% of women (11% in total) in lowland Communes.

Figure 2 demonstrates a comparison of the pre- and post-course evaluation results in upland and lowland Communes.

Figure 2: Comparison of pre and post-course assessment results in upland and lowland communes



A total of 207 households conducted pre-course competency assessments in Son Hai and Nghia Tho Communes; compared to 856 households in lowland Communes (Hanh Phuoc, Tinh Tho, Duc Phong and Pho Chau Communes). Post-course competency assessments revealed that upland Communes generally had lower levels of competency after training:

- Concern: 59% of men and 65% of women (62% in total) in upland Communes and 36% of men and 39% of women (38% in total) in lowland Communes.
- Consolidating: 38% of men and 32% of women (35% in total) in upland Communes and 54% of men and 49% of women (51% in total) in lowland Communes.
- Competent: 1% of men and 2% of women (1% in total) in upland Communes and 9% of men and 12% of women (11% in total) in lowland Communes.

Importantly, very few households had critical levels of competency upon the completion of the Animal Health Training Courses. Difficulties in Son Hai and Nghia Tho Communes were encountered with poor literacy skills and low educational levels. An explanation of these difficulties is provided below. It is evident that alternative training approaches will need to be developed for upland ethnic minority households. This alternative approach will become increasingly important as RUDEP expands to Cycle 4 Districts and Communes where the majority of households are ethnic minority and levels of literacy and Kinh Vietnamese language skills are extremely low.

4.4 Difficulties Encountered During Implementation

Some minor difficulties were encountered during implementation during the Animal Health Training Courses and whilst conducting the pre- and post course assessments. These difficulties impacted on the desired levels of competency gains expected as a result of the training.

- **Infrequent Levels of Attendance at Training Sessions:** In many cases, households did not attend all training sessions for a number of unspecified reasons (e.g. cropping, busy, weddings/funerals, etc.). Efforts were made to reduce this potential problem through having the training schedule drafted and agreed between the VSCF members and SDAH trainers. Despite this approach, only 90% attendance across all VSCFs was achieved. An additional related problem encountered was the a changing of the household members that attended training (e.g. husband attends if the wife is busy, or *vice-versa*). These issues impact on the knowledge learnt and consequently the level of competency of trainees (VSCF members) upon the completion of training.

- **Low Literacy Skills:** Many households in upland ethnic minority (H're) Communes have extremely low levels of education, literacy and numeracy. This issue poses two main problems to implementing training courses. Firstly, households have difficulties in understanding training content and technologies; particularly when some written information is placed on A0 paper. Secondly, a limited familiarity with Kinh Vietnamese language (particularly technical animal health vocabulary) means that households have difficulties in understanding course content. In many instances, households required assistance in conducting pre- and post-course assessments because of low literacy skills.

These difficulties encountered will be discussed at the Final Review Workshop with recommendations provided incorporated into future training activities.

5 Results and Conclusions

The results of the Farmer Animal Health Training and the pre- and post-course competency assessment forms demonstrated:

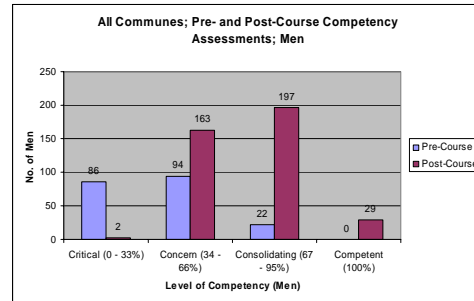
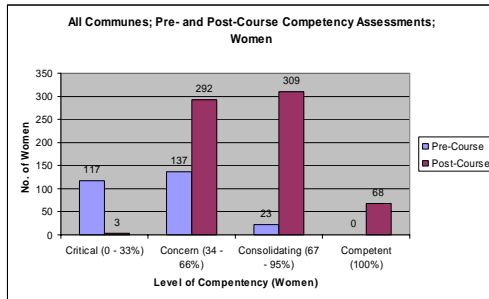
- Pre-course assessments revealed a very low level of competency of animal health of households. This indicates a limited knowledge of basic animal husbandry, recognising signs of sick animals and preventing common diseases and health problems. Given the high level of households obtaining loans from VSCFs for livestock production, animal health training will be important form of technical assistance to households to reduce potential risks associated with disease and health problems.
- Post-course assessments revealed an improvement in the competency of households as a result of the training. Households generally progressed one competency level (e.g. from 'concern' to 'consolidating' or from 'critical' to concern'). Few households are considered competent as a result of the animal health training. The Final Review Workshop needs to identify the difficulties that households still faces and reasons why level of competency is still below 'competent'. The recommendations arising from this understanding will need to be incorporated in future animal health training events.
- Pre-course assessments revealed no difference in the level of animal health knowledge between men and women. This is relevant for future animal health and livestock extension activities. Similarly, post-course assessments revealed that the level of competency gain following training was the same for men as women. This indicates two important gender considerations: women currently have the same level of competence as men with respect to animal health knowledge; and, women and men learn at equal levels and have similar competency gains as a result of training.
- Literacy and language skills will continue to be a problem in upland ethnic minority Communes. Efforts will need to be made to develop appropriate training methodologies and technical materials for future animal health training courses in upland Communes. As RUDEP expands to Cycle 4 Communes, efforts will need to be made to ensure that future training courses are more appropriate for ethnic minority households. It is recommended that any agricultural and livestock extension and capacity building activities supported by RUDEP involve SDAH and DAHS officers – particularly when developing appropriate extension packages for ethnic minorities.

Annex 1

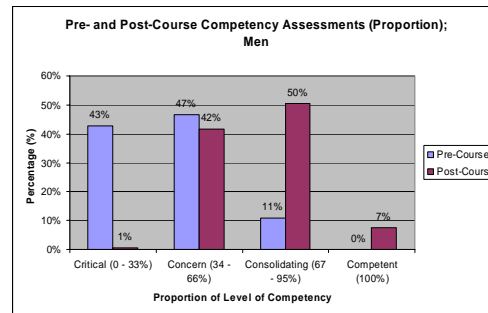
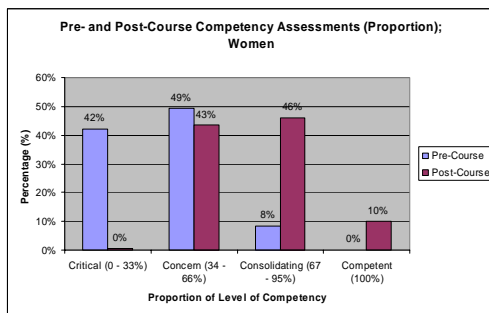
Pre and Post Course Competency Assessment Comparisons of Men and Women; All Communes

Annex 1: Pre and Post Course Competency Assessment Comparisons of Men and Women; All Communes

Comparison of Pre and Post Course Competency Assessment Results of Men and Women; All Communes



Comparison of Pre and Post Course Competency Assessment Results (Proportion) of Men and Women; All Communes

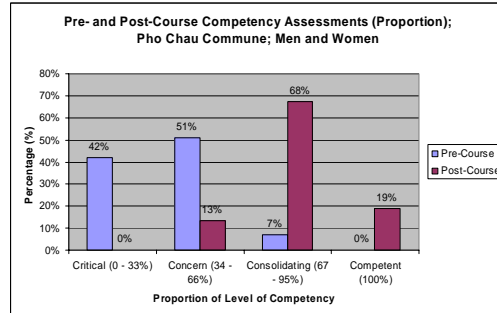
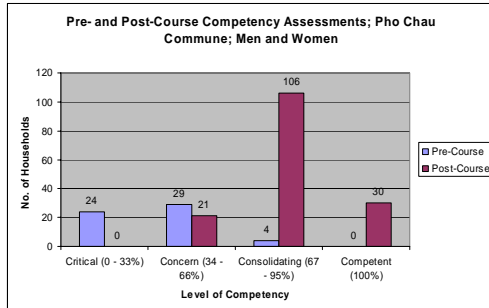


Annex 2

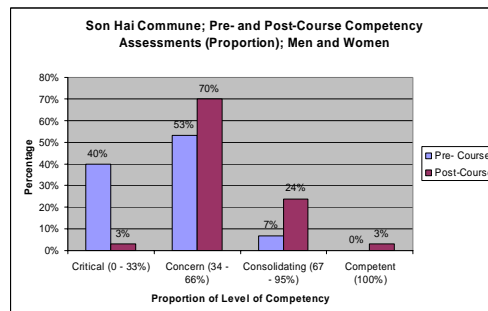
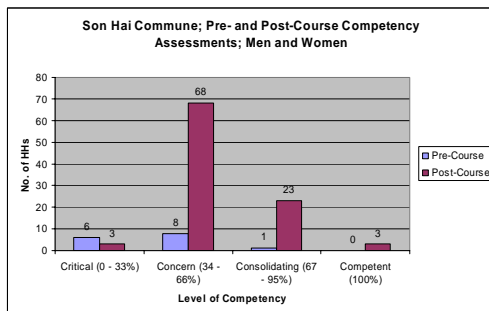
Pre and Post Course Competency Assessment Results; Individual Commune Results

Annex 2: Pre and Post Course Competency Assessment Results; Individual Commune Results

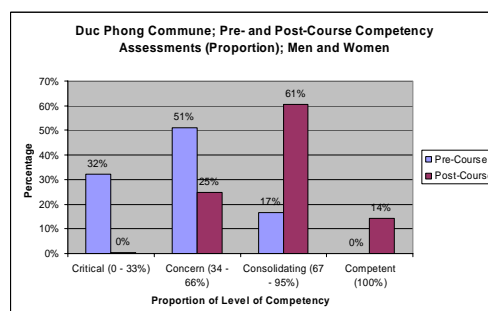
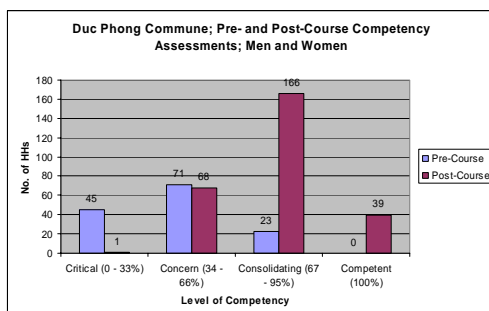
Pre and Post Course Competency Assessment Results; Pho Chau Commune



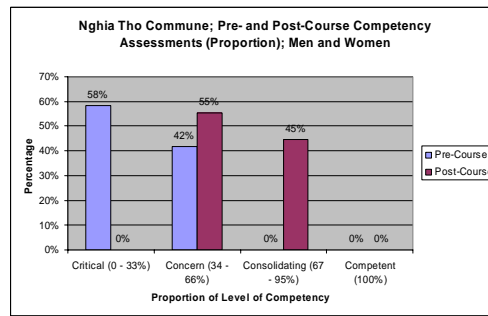
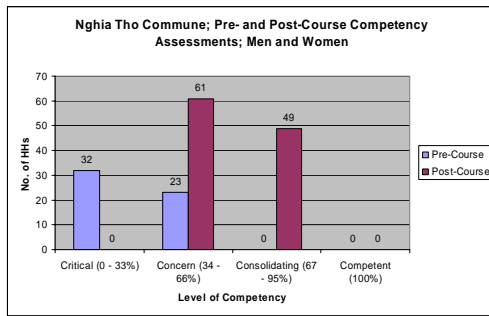
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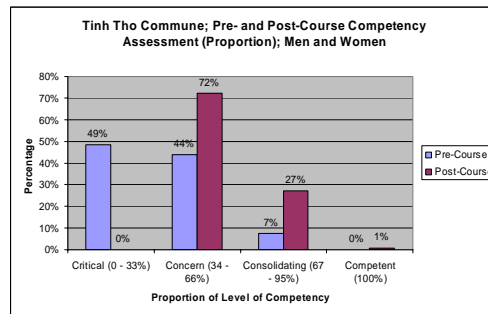
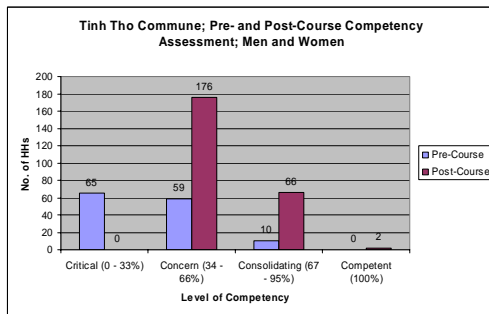
Pre and Post-Course Competency Assessment Results; Duc Phong Commune



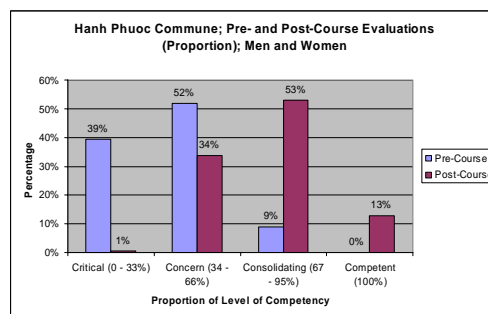
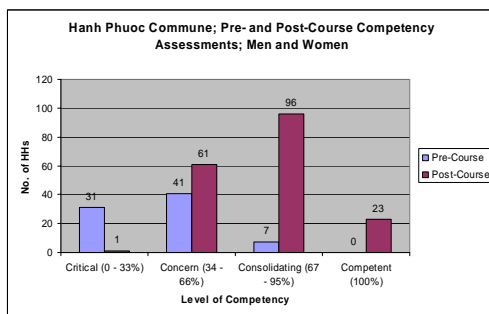
Pre and Post-Course Competency Assessment Results; Nghia Tho Commune



Pre and Post-Course Competency Assessment Results; Tinh Tho Commune



Pre and Post-Course Competency Assessment Results; Hanh Phuoc Commune



The Final Review Workshop needs to review the training course outline, duration and teaching methods. Further analysis of the pre- and post-course assessment needs to be conducted to identify issues that require further attention at future animal health training courses. Identifying future supporting animal health activities (e.g. study tours, medicine boxes, etc.) to incorporate into future animal health training courses needs to be identified. All results and recommendations arising from the Review Workshop need to be incorporated in the future animal health training courses. Ex-post course competency assessment should also be conducted in mid-2005 to identify post-course knowledge retention and application.

Limitations

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The methodology adopted and sources of information used by URS are outlined in this report. URS has made no independent verification of this information beyond the agreed scope of works and URS assumes no responsibility for any inaccuracies or omissions. No indications were found during our investigations that information contained in this report as provided to URS was false.

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