

AQUACULTURE HOUSEHOLD SURVEY QUESTIONNAIRE

ENUMERATOR: It is necessary to introduce the household to the survey and obtain the consent of all prospective respondents to participate. If a prospective respondent (e.g. a woman of reproductive age) is not present at the beginning of the interview, be sure to return to this page and obtain consent before interviewing him or her. Ask to speak with a responsible adult in the household.

Read to respondent:

Thank you for the opportunity to speak with you. We are a research team from Royal University of Agriculture. We are conducting a survey to learn about food security and aquaculture among households in this area. Your household has been selected to participate in an interview that includes questions fish farming and about the household generally. This interview will take less than one hour to complete. Your participation in this study is entirely voluntary, and all responses will be anonymous. If you agree to participate, you can choose to stop at any time or to skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with anyone. Only the household identification number will be placed on the questionnaire, but your name will not be attached to the survey or the report.

If you have any questions about confidentiality or voluntariness of the survey you may contact Dr. Robert Richardson at Department of Community Sustainability, Michigan State University, USA, telephone: +1 (517)-355-9533, email: rbr@msu.edu; or Mr. Chouk Borin, Royal University of Agriculture, Phnom Penh, Cambodia, telephone: +855 12 898 095, email: cborin@rua.edu.kh.

Your participation and input is very important for our study objectives.

Do you agree to participate in the survey? **YES** (If YES, proceed with the survey) **NO**

MODULE A. HOUSEHOLD IDENTIFICATION

A1. HOUSEHOLD IDENTIFICATION

Code	Item	Province	District	Commune	Village	Household
		A101	A102	A103	A104	A105
	Name (Location)					
	Code (location)					
A106	GPS coordinates	(N):		(E):		
A107	Code of enumerator					
A108	Date of visit	_____ dd / _____ mm / _____ yyyy				
A109	Time: Start/End (hours)					
A110	Wealth group:	1. Non-poor _____	2. Poor 1 _____	3. Poor 2 _____		
A111	Name of respondent:					

MODULE B. FISH PRODUCTION, SALES, INPUT USE IN THE LAST COMPLETED PRODUCTION CYCLE

B1. FISH FARMING

B101	Has this household ever raised fish? (current or past)	1=YES (continue below) 2=NO (skip to B104)	
B102	Prior to HARVEST, did this household have an existing barrow pit?	1=YES 2=NO	
B103	Prior to HARVEST, did this household have an existing fish pond?	1=YES 2=NO	
B104	Does this household also participate in HARVEST horticulture (vegetable growing) programs?	1=YES 2=NO	
B105	Does this household also participate in HARVEST rice production programs?	1=YES 2=NO	
B106	Have you sold fish for income?	1= YES (continue below) 2= NO (skip to B108)	
B107	Approximately how much of your total household income is from selling farmed fish?	1=Almost all 2=Most of it 3=Some of it 4=A small amount 5=None	
B108	Have you sold vegetables for income?	1= YES (continue below) 2= NO (skip to B110)	
B109	Approximately how much of your total household income is from selling vegetables?	1=Almost all 2=Most of it 3=Some of it 4=A small amount 5=None	
B110	Have you sold rice for income?	1= YES (continue below) 2= NO (skip to B112)	
B111	Approximately how much of your total household income is from selling rice?	1=Almost all 2=Most of it	

		3=Some of it 4=A small amount 5=None	
B112	Does this household <u>currently</u> raise fish?	1= YES (continue below) 2= NO (>> Module D)	
B113	Approximately how long have you raised fish?	Years	
B114	How many fish production cycles have you <u>completed</u> with the HARVEST program?	Number (0-4)	
B115	In the past 12 months, approximately how much total fish did this household produce?	Kilograms (kg)	
B116	Approximately how much of your harvest did this household consume as food?	1=Almost all 2=Most of it 3=Some of it 4=A small amount 5=None	

B2. FISH PRODUCTION AND SALES

ENUMERATOR: In the table below, list all the species of fish the household report having raised during the last production cycle. Then, for each species, ask the questions regarding production and sales.

Fish Species and Codes		Aquaculture Facility		Feed	How much did you produce?	Did you sell any [FISH SPECIES] from the last production cycle? 1=YES 2=NO (skip to next species)	Sales of FISH		
	code	code	Size (m ²)	Feed type code	Quantity (kg)		Quantity (kg)	How much did you receive in sales? (000s Riels)	
FISH SPECIES	B201	B202	B203	B204	B205	B206	B207	B208	
Fish species codes (B201): 1= Climbing Perch 2= Walking Catfish 3= Nile Tilapia 4= Pangasius Catfish 5=Silver Barb 6=Indian Carp 7= Common Carp 8= Silver Carp 9=Other (please specify)		Facility codes (B202): 1=Fish pond 2=Rice/fish intercrop 3=Community fishery 4=Steel cage 5=Wood cage 6=Other (please specify)		Feed type codes (B204): 1=Purchased feed 2=Feed provided 3=Homemade feed 4=Trash fish only					

B3. USE OF INPUTS IN FISH PRODUCTION

ENUMERATOR: If the household produced any type of fish (B2), complete the table below. It refers to the use of inputs with respect to fish production during the last production cycle. The spending figures should be related to inputs used in the aggregate for all species of fish.

Input Type and Code		Did you use [INPUT TYPE] in fish production during the last production cycle? 1=YES 2=NO (>> next type)	What was the source? (Source code list)	If purchased, how much did you pay in the total? (Riels)
	code			
INPUT TYPE		A	B	C
Setup cost (pond, facility, equipment, etc.)	B301			
Fingerlings	B302			
Commercial fish feed	B303			
Fertilizer or compost	B304			
Lime	B305			
Net	B306			
Fencing	B307			
Stocking hapa	B308			
Transportation cost	B309			
Technical services	B310			
Operations and maintenance	B311			
Other facilities or equipment	B312			
Hired labor	B313			
Other (specify)	B314			
Source codes: 1=Own (self-produced) 2=Provided free by HARVEST program 3=Purchased from dealer 4=Purchased from farmer		5=Provided free by another program (NGO or government) 6=Provided free by friend, neighbour, or family 7= Combination of own and purchased 8=Combination of own and provided free 9=Combination of purchased and provided free 10=others (specify)		

How likely are you to use these fish farming technologies in the future?

Code	Fish technologies	Very likely	Somewhat likely	Neutral	Unlikely	Very unlikely
B315	Aquaculture in fish ponds					
B316	Purchased fingerlings					
B317	Commercial fish feed					
B318	Purchased fertilizer					
B319	Purchased lime					
B320	Purchased fencing					
B321	Stocking hapa					

B4. PERCEPTIONS OF FISH FARMING

B401. <i>think about the way you raise your fish, do you feel you can improve your fish yield by adopting the new technologies (provided to you by Harvest) and modify your way of normal practice?</i>	1= YES 2= NO 3=unsure	
B402. <i>Do you believe that there are barriers to fully adopt these aquaculture technologies brought to you by Harvest?</i> If NO, please skip to question B520.	1= YES 2= NO 3=unsure	

If YES, let me read some barriers, please indicate how important you feel these barriers are (from 1=Not at all important to 5=Very important):

	Barriers to adoption of new/improved farming practices or technologies	1= Not at all important 2= A little important 3= Neutral 4= Somewhat important 5= Very important
B403	Access to fingerlings	
B404	Price of fingerlings	
B405	Quality of fingerlings	
B406	Access to fish feed	
B407	Price of fish feed	
B408	Quality of fish feed	
B409	Selling price of fish in markets	
B410	Access to fish markets	
B411	Access to sufficient supplies of water	
B412	I do not know the new technology	
B413	I do not understand the new technology	
B414	Adoption of the new technology does not make any differences	
B415	The fish farming technology is not suitable to my operation.	
B416	I cannot get credit needed to adopt the new technology.	
B417	I do not own the land where I raise fish.	
B418	My fish farming operation is too small.	
B419	Other reasons (please specify...)	

In response to the following statements, please respond by saying if you agree, disagree, or neither:

	Statement	Code 1 = Agree 2 = Disagree 3 = Neither
B420	I have a good feeling about aquaculture	
B421	Farmed fish are less delicious than wild caught fish	
B422	Fish feed is readily available in my province	
B423	Sometimes I cannot afford all of the food to feed my family or myself	
B424	Aquaculture is a highly risky practice	
B425	I would encourage my friends and family to participate in aquaculture	
B426	High quality fingerlings are readily available in my province	
B427	Aquaculture helps to conserve natural resources in the Tonle Sap	
B428	Aquaculture is an economically viable and profitable activity	

MODULE C. ACCESS TO EXTENSION AND ADVISORY SERVICES

C1. FISH PRODUCTION AND MARKETING

ENUMERATOR: In this section, please collect information on reception of extension and advisory services for fish production and marketing. *I will read a list of extension service providers, please tell me whether you have used services from any of these providers and how often you have used their services in the past 12 months.*

Code	Extension Service Provider	Have you received services from them? 1= YES* 2= NO	*If Yes, number of times contacted in past one year	What type of practice, information, or access did you learn about with this service? (codes)	Did you pay for the service? 1=YES 2=NO	After receiving the advice, did you follow it? 1=YES 2=NO
		A	B	C	D	E
C102	District agricultural service center, extension agent					
C103	Local village/commune office					
C104	Fertilizer or Input supply dealer					
C105	HARVEST program					
C106	Other program or project (besides HARVEST program)					
C107	University or college of agriculture					
C108	Technical or vocational schools					
C109	Cambodian Agricultural Research and Development Institute (CARDI)					
C110	Agricultural research station					
C111	Fish trader					
C112	Neighbors or friends					
C113	Other (Please specify)					
Extension type codes: 1=Fish farming techniques 2=Input usage 3=Pond construction 4=Pond management 5=Drying at post-harvest 6=Storage facilities 7=Advice on output prices 8=Advice on input prices 9=Information on where to sell 10=Credit, micro-finance, or savings 11=Other (please specify)						

C2. SOURCES OF INFORMATION

What is your main source of information about fish farming, I will read the list of possible information source and please indicate how much you use the source for information.

	Type of information	1= Nothing at all 2= A little 3= Some 4= A fair amount 5= A great deal
C201	HARVEST technicians	
C202	Newspapers and magazines	

C203	Extension publications	
C204	Television programs	
C205	Radio programs	
C207	Web/Internet/E-mail	
C208	Extension meetings, workshops, courses	
C209	Aquaculture researchers	
C210	Demonstrations fish farming operations and field days	
C211	Personal contact with extension agents	
C212	Leader farmers in your area	
C213	Neighbors/relatives	
C214	Other sources (Please specify)	

MODULE D. DISADOPTION

ENUMERATOR: This section is only for those households that no longer raise fish (answered **NO** to Question **B112**). For all other households, please skip this module.

D1. Fish production cycles completed

D101	How many fish production cycles did you <u>complete</u> with the HARVEST program?	Number (0-4)	
D102	Did you stop practicing fish farming?	1=YES 2=NO	

How important were the following factors to your decision to stop fish farming?

	Factors related to decision to stop practicing fish farming	1= Not at all important 2= A little important 3= Neutral 4= Somewhat important 5= Very important
D103	Access to fingerlings	
D104	Price of fingerlings	
D105	Quality of fingerlings	
D106	Access to fish feed	
D107	Price of fish feed	
D108	Quality of fish feed	
D109	Selling price of fish in markets	
D110	Access to fish markets	
D111	Access to sufficient supplies of water	
D112	I do not know the new technology	
D113	I do not understand the new technology	
D114	Fish farming is not profitable.	
D115	The fish farming technology is not suitable to my operation.	
D116	I cannot get credit needed to continue fish farming.	
D117	I do not own the land where I raise fish.	
D118	My fish farming operation is too small.	
D119	Other reasons (please specify...)	

In response to the following statements, please respond by saying if you agree, disagree, or neither:

	Statement	Code 1 = Agree 2 = Disagree 3 = Neither
D120	I have a positive view of aquaculture	
D121	Farmed fish are of lower quality than wild caught fish	
D122	Fish feed is readily available in my province	
D123	Sometimes I cannot afford all of the food to feed my family or myself	
D124	Aquaculture is a highly risky practice	
D125	I would encourage my friends and family to participate in aquaculture	
D126	High quality fingerlings are readily available in my province	
D127	Aquaculture is environmentally beneficial for the Tonle Sap	
D128	Aquaculture is an economically viable and profitable activity	

MODULE E. DEMOGRAPHICS

E101. Are you the head of this household?	1=YES (skip to E103) 2=NO (continue below)	
E102. What is your relationship to the head of household?	1 = Spouse/partner 2 = Son/daughter 3 = Son-in-law/daughter-in-law 4 = Grandson/granddaughter 5 = Mother/father (or Mother/father-in-law) 6 = Brother/sister (or Brother-/sister-in-law) 7 = Nephew/niece 8 = Cousin 9 = Other relative 10 = Other relationship	

	E103	E104	E105	E106	E107
Household Member	Sex 1 = M 2 = F	What is the age in years?	What is the marital status? 1 = married 2 = divorced 3 = widowed 4 = never married	Number of years of schooling	Can this person read and write? 1 = YES 2 = NO
Head of Household					
Respondent					

E108. How many children aged 14 years or less are in this household?	
E109. How many people aged 15-69 years are in this household?	
E110. How many people aged 70 years or above are in this household?	

E111. Does this household own a: (If yes, ask how many, if no write 0)	Asset	Number
	a. Mobile phone	
	b. Radio	
	c. Television	
	d. Bicycle	
	e. Motorbike	
	f. Car or truck	
	g. Solar panel	
	h. Improved cooking stove	
	i. Refrigerator	
j. Sofa		

E2. LIVESTOCK

Do you raise any of the following livestock?

	Livestock	1=YES* 2=NO	*If YES, how many do you raise? (number)
		A	B
E201	Cattle		
E202	Buffalo		
E203	Pigs		
E204	Chicken		
E205	Ducks		
E206	Goats		
E207	Others (Please specify.....)		

E3. SOURCES OF HOUSEHOLD INCOME

<i>Sources of income: (Circle one under both E301. and E302. columns)</i>	<i>E301. What is the most important source of income for this household?</i>	<i>E302. What is the second most important source of income for this household?</i>
<i>Sales of fish</i>	1	1
<i>Sales of rice from your own fields</i>	2	2
<i>Sales from vegetable gardens</i>	3	3
<i>Wage labor</i>	4	4
<i>Small business/self-employment</i>	5	5
<i>Remittances</i>	6	6
<i>Retirement funds</i>	7	7
<i>Other (specify):</i>	99	99

Thank you for taking the time to complete this survey.