Improving smallholder farmer incomes through strategic market development in mango supply chains in southern Vietnam

Assessing impacts through agricultural economic research activities to inform supply chain interventions

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Implementing Agency

Funding Agency

Where do agricultural economics fit in the project?

General project objective: **to achieve socio-economic impact**

▶ help smallholder famers, communities and businesses

▶ to **derive greater income and livelihood benefits** from production and sale of fresh and processed mango products

Agricultural economics research to improve knowledge about:

▶ the impacts of different project interventions (income, gender empowerment)

▶ the **key household-level socio-economic factors that determine** production scale and efficiency, technology adoption, innovation and market focus for mango farmers.

▶ **Evaluate options to overcome selected barriers to competitiveness in fresh and processed mango value chains**

Impact assessment activities in the mango project

Under objectives 1 and 2

1. Stratified baseline socio-economic survey of mango farming households (at the inception of the project)

2. Evaluation tools (progress indicators) used to measure, monitor and outputs of each intervention

3. Research analysis and validation (end of project)

   ▶ Technical, financial and socio-economic ex-post impact assessments for the targeted interventions

Under objectives 1 and 2

1. Stratified baseli~~ne~~ ~~surve~~y of mango
farmi~~ng~~ ~~(~~ ~~project)~~

Agree on the project impact pathways

Inputs	→	Outputs	→	Outcomes	→	Impacts

Project activities
and resources

Project results

Beneficiaries taking
ownership

Direct and
indirect effects
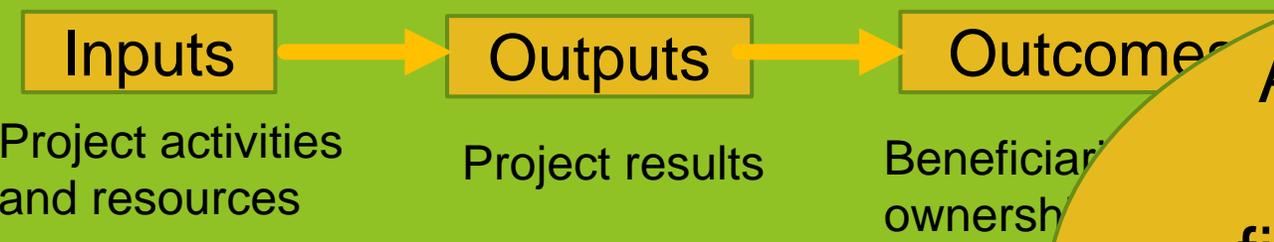
3. ~~~~ Which impacts do we focus on?

▸ Technica~~l,~~ ~~ass~~essments
for the targeted interve~~ntions~~

Under objectives 1 and 2

1. Stratified ba~~se~~ ~~~~ ~~~~ of mango
   farm~~~~

Agree on the project impact pathways

| Inputs | → | Outputs | → | Outcomes |

Project activities
and resources

Project results

Beneficiar~~ies~~
ownersh~~ip~~

Agree on consistent economic and financial templates to be used in the *ex post* surveys and as progress indicators

Which impacts do w~~~~

3. R~~~~

▶ Technical, ~~fin~~~~~~
   for the targeted interventions

Gender focus in the quantitative surveys

- **Who has access to what?**
  - Credit, land tenure, information and knowledge

- **Who does what ?**
  - Type of labor: a) family labor / permanent salaried labor / occasional labor
    b) on-farm versus off-farm household activities and incomes

  > Focus on farm and HH scales

- **Who decides what ?**
  - Who determines how things are done?
  - How have gender roles and responsibilities changed in line with changes in crops and farming practices?

- **To be complemented by specific gender research components:**
  - Qualitative case study, workshop sessions, capacity development,

  > Focus on additional scales: Group / commune levels

An illustration of impact assessment study results:

Organic rice farming in the Lao PDR

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General questions & sampling

UNDER WHICH CONDITIONS CAN ORGANIC AGRICULTURE LIFT SMALL FARMERS OUT OF POVERTY ?

- Is organic agriculture really <u>accessible</u> to poor farmers?

- Can organic agriculture <u>lift farmers out of poverty</u>?

- What are the <u>other main changes</u> induced by organic agriculture (organizational, commercial, agronomic, etc.)

Individual survey of 615 rice producers

- 225 **organic** farmers already certified in 2013

- 98 farmers **no longer certified** in 2013

- 292 conventional farmers (**never certified**) – **control group**

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Determinants of organic farming

Organic	dF/dx	Sdt	P>|z|
Age	.0610693	.0158409	0.000
Age2	-.004	.019	0.000
Education	.0322686	.0082602	0.000
Dependency Ratio	.2385493	.1455104	0.101
Had a mobile phone in 2005	.0930375	.0584637	0.109
House with tiled roof in 2005	.1462373	.049296	0.003
Borrowed money in 2005	.2258707	.0450721	0.000
BUF~2005	.0093817	.004743	0.048
PIG2005	-.0109167	.0056742	0.055
Rice area in 2005	-.0039267	.0218316	0.857
Had a handtractor in 2005	-.0066804	.0521114	0.898
Had a TV in 2005*	.0450503	.0526398	0.393
MOT~2005*|	-.0081201	.0578084	0.888
nb obs	502		
Log Likelihood	-297.15351		

Certified organic farmers are younger, more educated and better endowed (land, animals, etc.)

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Organic farming changes farming practices and the way farmers connect to markets

ORGANIC VS. NEVER ORGANIC (ALL VILLAGES)

dependent variables	Regression on covariates	Regression on PS	Common no relacement caliper (0.01)	NN(10) common	NN(5) caliper (0.05)	Kernel common
Mean days/ha	19.336***	19.351***	19.695***	18.567***	18.703***	18.702***
Organic fertilzer	0.203***	0.203***	0.248***	0.203***	0.209***	0.195***
% sold to main buyer	6.925***	6.921***	7.300***	8.364***	8.298***	7.789***
Highest price	141.601***	141.606***	126.447***	169.570***	145.653***	159.853***
Evolution of % sold	0.174**	0.174**	0.124**	0.192**	0.198**	0.187**

▶ Certified organic farming requires on average **18-19 man days/ha** more than conventional farming.

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Who are those who quit?

Mostly vulnerable farmers could not sustain certified organic farming and **dropped out**

EXORGANIC	Coef.	Sdt	P>|z|
Agec1	**0.544**	**0.220**	***
Agec3	**0.424**	**0.211**	**
Sex	-0.203	0.178	
Education	-0.044	0.290	
Rice planted area in 2005	**-0.171**	**0.075**	**
Food insecurity	**0.361**	**0.139**	***
DependencyR	-0.336	0.489	
Member of a credit organization	**-0.381**	**0.158**	***
_cons	-0.051	0.287	
Nb obs	308		
Log likelihood	-173.434		
Pseudo R2	0.09		

→ participation to organic farming is **not for every one**

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THANK YOU FOR YOUR ATTENTION