

Participatory Impact Pathway Analysis (PIPA)

Regional Workshop Report

Rice Postharvest Management in Vietnam

30-31, July 2009

114 Truong Trinh, Hanoi, Vietnam

ADB RETA No. 6489

***Bringing about a Sustainable Agronomic Revolution in Rice Production in Asia by
Reducing Preventable Pre- and Postharvest Losses***



Figure 1: Workshop Participants

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1. Background

Postharvest losses in the Vietnam as in other Southeast Asian countries are typically 15–20% in weight loss. When quality is factored in, it can result in a 10–30% loss of value in the market. From 2005 to 2008, the Asian Development Bank (ADB) / Japan Fund for Poverty Reduction (JFPR) 9036 project “*Improving Poor Farmers’ Livelihood through Improved Rice Postharvest Management*” began pilot testing improved postharvest technologies in four villages in Viet Nam and eight villages in Cambodia. Results from this project and also from the Swiss Agency for Development and Cooperation (SDC)-funded Postproduction Work Group of the Irrigated Rice Research Consortium (IRRC) with activities in Indonesia, Lao PDR, and Myanmar demonstrated that losses can be significantly reduced and income from rice harvests increased if farmers and processors are enabled to use improved postharvest management options and technologies like mechanized harvesters, paddy dryers, hermetic storage systems and improved milling practices. Additional benefits can come from the use of up-to date market information. Both projects included private sector stakeholders as implementing partners in project activities. This was successful on a pilot basis in Cambodia but not yet sufficient for a wider adoption. Farmers and millers in the project villages have now realized the benefits of the improved postharvest management and are increasingly asking for more assistance in sourcing the technologies that they find beneficial (especially hermetic storage and drying systems).

Rationale

The International Rice Research Institutes (IRRI) new ADB funded postharvest initiative has the objective to scale out these postharvest innovations, which have been piloted in the limited number of villages, to a large number of farmers. The objective is to reach a minimum of 300,000 households in three countries (Cambodia, Philippines and Viet Nam) after five years. This will require an increased focus of project activities on strengthening agricultural and industrial extension provided by both public- and private-sector stakeholders. It will also need better linkages to support service providers for financing for investment and operating capital and for marketing. A major component will be the development of business models for farmers and postharvest practitioners (see Appendix 1).

In order to facilitate the dissemination of the proven technologies listed above, the project will strengthen country postharvest innovation systems by facilitating in-country Learning Alliances. These Learning Alliances can be understood as the platforms for working with established national partners from the public research and extension systems and for embracing new partners, especially from the private sector and Non Government Organizations (NGOs). The Learning Alliances will seek to widen stakeholders’ choice of technologies and business models, foster adaptation and innovation and, through regular reflection, lead to better understanding of what works where and why. Regular cycles of experimentation, reflection and adaptation is expected to promote interaction and learning among members. The Learning Alliances are expected to (1) increase diversity of options (through prototyping and experimentation), (2) increase interaction among stakeholders (through regular group reflection), and (3) improve stakeholders’ ability to identify and choose what works (through research). We expect that they will provide more flexible and more participatory means for project management and the possibility to accommodate new partners.

As a result of the national PIPA-LA workshop in Vung Tau, Vietnam, in 26th-28th May 2009, the representatives suggested that the PIPA-LA methodology should be applied and implemented on a sub regional level. Participants from the provinces should be invited and ensure that the specific needs of the region will be addressed during the project implementation. The responsibility was divided among five institutions with Nong Lam University being the coordinating lead institute for overall Vietnam.

Objectives

The overall workshop objective is to provide the input for the development of the region specific sub-projects for Viet Nam, including identification of key stakeholders in the region, identification of the project's impact pathways, and to form the Learning Alliance in the region as a step to merge with the National Learning Alliance.

The specific objectives of the sub-workshops are exactly like those of VungTau workshops, except that they are confined to the regional level (consisting of 7- 10 Provinces) so that they can be more regionally specific

- Clarify project objectives, its planning logic and guiding principles in the Viet Nam regions
- Identify key stakeholders, their roles and foster ownership of the project amongst different stakeholders on the regional and provincial level.
- Identify the project's impact pathways (i.e. project strategies to bring about specified changes) and document inputs to develop an impact evaluation plan for the regional and provincial level.
- Clarify the Learning Alliance concept and reach agreement on the next steps to launch one in Viet Nam as a multi-stakeholder platform and support mechanism for the project planning, steering, monitoring and evaluation (M&E) and capturing the learning.

With the addition of

- Capacity building and training of partners in Vietnam in participatory methodologies and facilitation skills.

Workshop deliverables

- Network maps showing who is working with whom in the region (useful for planning and monitoring sector level integration)
- Project vision for five years
- Description for the project short-term expected changes resulting from project activities, and longer-term contribution to developmental impact in Vietnam in so-called logic models
- Identification of likely members of the Vietnam Regional (*North Vietnam*) Postharvest Learning Alliance
- Identification of draft list of topics for investigation by the Learning Alliance, the inquiry/ experimentation needed and initial allocation of responsibilities (this would be firmed up after the workshop)
- National Learning Alliance consisting of key stakeholders from private and public sectors (to be finalized in follow up activities after the workshop).

Schedule of sub-regional workshop series

The workshop in Nha Trang was scheduled to be for one and half day, part of a series of total five regional workshops in Vietnam (see Appendix 2) and also Appendix 3 for detailed program.

Workshop languages

English was the working language for the conceptualization and preparation. All preparatory documents and the presentations were translated into Vietnamese, which was also the main language of the workshops. Questions asked by participants were translated for the PIPA-LA experts to ensure that the answers are in line with the concept and methodology. As soon as possible (to ensure not to disrupt the process) the content of the group work was translated into English for the workshop responsible to ensure understanding and necessary action with regards to the exercise results produced.

2. The PIPA process

A major component of the workshop is a Participatory Impact Pathways Analysis (PIPA) which follows the road map shown in Figure 1. Guided along certain questions a group of project participants and stakeholders describe what they think is going to happen in their project and beyond. This is done by looking at two things: 1) the main problem the project tries to solve and asking why this problem exists, and 2) the stakeholders, their relationships and influences. These are all in the context of the region.

Project impact pathways specify who needs to change for the project to achieve its vision and what the project has done/needs to do, to achieve those changes. The changes are quantified as far as possible as a way of predicting actual and future project impacts as well as providing the basis for an evaluation plan. Through the PIPA process key leverage points will be identify for achieving these changes as a basis for the activities of the Learning Alliance. All this will be captured in a so-called outcomes logic model.

Participation

The 30 participants in the workshop (see Appendix 1 and worksheet participants in *VTN_5_WS_Workbook_Hanoi-ENG.xls*) were staff from government agencies (8), extension (13), and researchers working on postharvest (6), as well as farmer collectives' representatives (3), and no representatives from the private sector, manufacturers or non-government organizations. Dr. Tran Thi Mai and Dr. Nguyen Thi Duong Nga facilitated the workshop in Hanoi supported by Dr. Phien Pham Hien, expert consultant, and the translator Ms. Dinh Thi Tam. The IRRI facilitation team (2) Tonya Schuetz, Impact Specialist, and Rica Flor, IRRC Anthropologist in the project prepared the workshop concept, directed and backstopped the facilitation of the sub-regional workshop series. Figure 1 shows the workshop participants.

Note on additional documentation:
*This report contains a synthesis of all the group results and some examples from individual groups. The individual group outputs are captured in a separate Excel document referred to as *VTN_5_WS_Workbook_Hanoi-ENG.xls* see **Error! Reference source not found..***

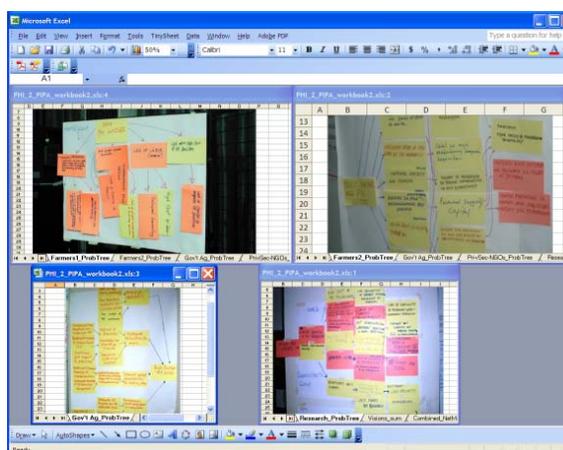


Figure 2: Excel workbook containing problem trees and other group work output

The roadmap followed throughout the workshop is presented in Figure 3.

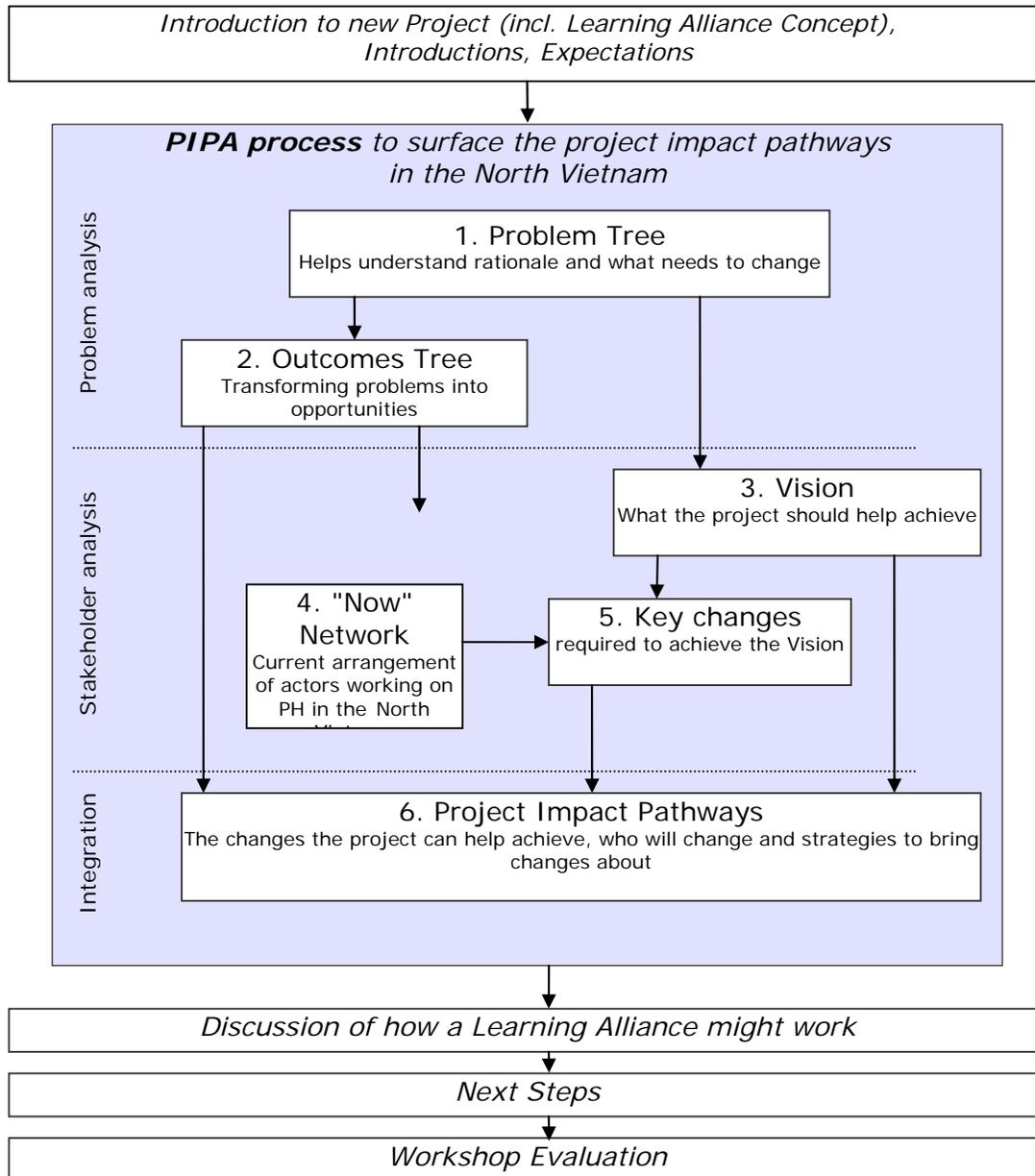


Figure 3: Workshop Road Map

3. The workshop

Day 1: Status of postharvest, beginning impact pathways for new project

The workshop was opened by Dr. Phan Thanh Tinh, director of VIAEP. Message from IRRI was delivered to participants by Dr Tonya Schuetz. Each participant was introduced by his/her partner after a quick interview. Dr. Phan Hieu Hien gave an overview of the postharvest situation in Vietnam. Representatives from three provinces (Ninh Binh, Nam Dinh and Vinh Phuc) presented the province-specific situation. A background of the IRRI postharvest activities and the new ADB-funded postharvest project ADB RETA No. 6489 “*Bringing about a Sustainable Agronomic Revolution in Rice Production in Asia by Reducing Preventable Pre- and Postharvest Losses*”, was also presented. All presentations and workshop documentation were handed out to participants on a CD.

Before lunch participants were introduced to the PIPA process and the Learning Alliance concept. They were assigned to four groups according to sectors as shown in Table 1.

Table 1: Group composition

Count	GROUPS	Count	GROUPS
	Farmers and Private Sector		Government Agencies 1
1	Vu Van Phong	1	Nguyen Hai Nam
2	Tong Van Dung	2	Nguyen Duc Hien
3	Nguyen Ba Tuoc	3	Nguyen The Vinh
4	Nguyen Van Thu	4	Trinh Kim Uyen
5	Nguyen Van Linh	5	Le Van Thang
6	Nguyen Thi Thu Hang	6	Tran Thi Thu Hang
7	Do Hoang Thanh	7	Truong Quang Bang
		8	Pham Hong Le
	Researchers		Government Agencies 2
1	Tran Tri Hoan	1	Nguyen Thi Vang
2	Pham Duc Hung	2	Le Thi Thanh Ngan
3	Nguyen Thi Hong Ngot	3	Duong Duc Hong Tuan
4	Nguyen Bich Thuy	4	Nguyen The Truong
5	Tran Lan Huong	5	Nguyen Thi Hien
6	Nguyen Xuan Thiet	6	Nguyen Van Dinh
7	Tran Thi Phuong Nga	7	Nguyen Thi Thoa
8	Nguyen Thi Ha	8	Nguyen Van Tam
9	Nguyen Thi Lan Huong		

The process of developing impact pathways for reducing postharvest losses in the region followed the roadmap shown in Figure 3 the agenda (see appendix 3). The first step was to construct a **problem tree** (see 4a and

Figure b) identifying the main causes of high postharvest loss in the region by asking ‘why’ this problem is happening. By asking this question several times (between three to maximum five times) the main problem is broken down into smaller units. At the final stage participants derive at intervention points where the project can make a difference.

Participants were introduced to the concept of problems being opportunities and how to convert a problem tree into an **outcomes tree** defining the positively changed behavior of an actor. With the focus on the positive, participants developed a vision of project success in reducing postharvest losses in five years time, in 2013. The last part of the morning session was for groups to come up with a common vision describing the future scenario along the questions below in Table 2.



Figure 4a (above): Farmers group discussing and 4b (right) their problem tree

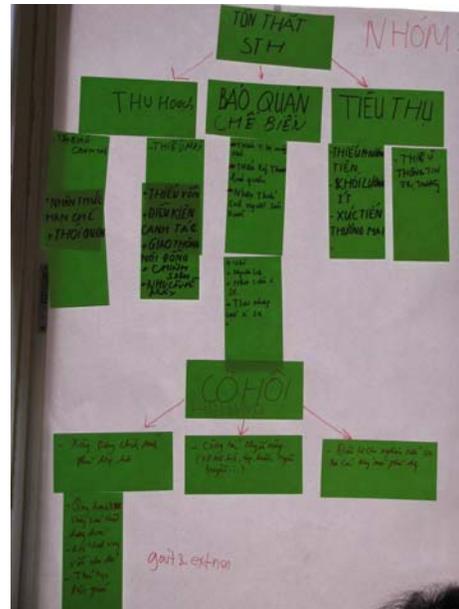


Table 2: The vision example of Group 1.

<p>What are the next users doing differently? How are men benefiting? How are women benefiting?</p>	<ul style="list-style-type: none"> - Machinery producers: quality products, good price - Governmental managers: make suitable structure and policy - Agricultural Extension staffs: change extension methods, improve ability of agricultural extension staffs, improve ability of spreading postharvest models - Researchers: make equipments & machinery in accordance with production conditions; get the feedback, improve working ability, research methodology, infrastructure - Service: get better services for customers, demonstrate machinery models
<p>How are project outputs disseminating (scaling out)?</p>	<ul style="list-style-type: none"> - Propaganda: through social communities (clubs, associations, groups, etc); Public media (press, radio, TV, internet); Visiting, seminars, conferences; Updating knowledge & experience; Training and establishing models and learning alliance for farmers
<p>What political support is nurturing this spread (scaling up)</p>	<ul style="list-style-type: none"> - Investment in building more agricultural and industrial extension models - Land management: programming areas for commodity production, encourage land integration. - Strengthening marketing activities and consumption - Support in capital, building trade mark
<p>What are the end users doing differently? How are they benefiting?</p>	<ul style="list-style-type: none"> - Change their mind (new techniques, technologies) - Reduce losses, increase product quality and income - Invest readily - Increase productivity (yield, quality, force use) - Change production habits, promote the formation of join-venture and associations.

The

following

Table 3 is a summary the visions that were presented back to participants while Table 2 gives the detailed vision of the Farmers Group 1.

Table 3: Summary of visions of the groups (please double check)

Stakeholder	Change
Intermediaries	<p><i>Extension workers:</i> improve knowledge, skills to develop extension models, communicate/disseminate. (2); Change extension methodology (1) Improve extension capacity (1) (3) Improve knowledge about PH (3) Introduce new varieties (4) Combine cultivation techniques + PH techniques (4)</p> <p><i>Researchers:</i> Change ideas, link research with practice (2) (1) (3) (4)</p> <p><i>Enterprises:</i> have after use promotion, prices and quality of machines are good (harvesting and drying machines) (2)(1)</p> <p><i>Policy makers:</i> Build and add new suitable policies (2) (1) (4)</p> <p><i>Machinery Manufacturers:</i> Produce products with good quality, reasonable prices, and insure demand (1) (3)</p>
Disseminate results of the project	<p>Training to release new PH techniques and technology. Issue and distribute document, leaflet (2) (4) Training through every level</p> <p>Inform and promote via media (2)(1); communities (clubs...) (1) (3) + cooperatives (4); Conferences, workshops... (2)</p>
Supporting policies	<p>Land use policies(2) Plan producing areas,</p> <p>Loan policies: low interest loan, support to get loans (2) (1) (3) (4)</p> <p>Policies for agricultural support (seed, science and technology) (2)</p> <p>Policies for trade promotion to sell products (2) (1)(3) (4)</p> <p>Investment in building of agricultural and industrial service models (1) (3) (4)</p> <p>Policies to support techniques and labour force (3)</p>
Final users	<p>Change old habit (2)(1) (3) Apply new innovated techniques and technologies (4)</p> <p>Invest courageously (1)</p> <p>Alter and apply science and technology for reducing PH losses (3)</p> <p>Increase productivity (1) (3) (4): increase production, reduce losses</p> <p>Lower production cost (2)</p> <p>Improve living standards for farmers (2)</p> <p>Dealt with obstacles in production (2)</p> <p>Develop sustainable agriculture (4)</p>

Network mapping

The topic of network concepts, network mapping and the possibility how to visualize networks were introduced to the participants. In their groups, participants were asked to develop their network maps to describe how organizations are currently linked together in the postharvest sector in the region (see Figure 5a and 5b). Participants drew maps with four relationships – funding flows; research links; scaling-out and scaling up; considering five stakeholder/actors categories (Table 4).

Table 4: Different Stakeholder Categories

Actors	Examples	People and/or organizations ...
<i>First users</i>	Extensionists, Government agencies: Department of Agro-processing, forestry products and salt production	... who directly use project outputs (technology, methods, knowledge)
<i>Final Users</i>	Farmers	... that ultimately benefit
<i>Politically-important Actors</i>	Government agencies: Provincial/district people committee	... whose support is needed for project success
<i>Donor</i>	ADB	... who provide funding
<i>Project Implementer</i>	IRRI, PhilRice, Researchers	... who work on project activities

Scaling-out (adoption) is the spread of technology and knowledge from farmer to farmer, community to community, within the same stakeholder groups. Scaling-up is an institutional expansion, based largely on first-hand experience, word-of-mouth and positive feedback, from adopters and their grassroots organizations to policy makers, donors, development institutions, and the other key stakeholders to building a more enabling environment for the scaling-out process. In other words, scaling-up is the process by which policies and norms change in such a way that they support a scaling-out process. Participants also flagged actors whom they think to be extremely influential (with exclamation point) and those that they think may have a significantly negative attitude to the project (with lightning stroke). See appendix 5 for abbreviations and terms used in network maps and appendix 6 for current postharvest network and vision.

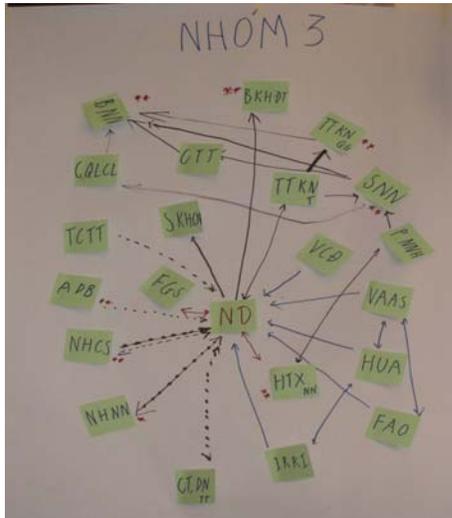


Figure 3 (left): Map of the postharvest network drawn by farmers and private sector group

In the next activity, participants identified the main network changes required to achieve their respective visions. They identified the actors whom they think should change with respect to their vision of success and the actors they brought out in the network maps. They identified the practice change needed for each actor and the change in knowledge, attitudes and skills needed for that specific actor to change in practice as in Figure 6.

Figure 6 (right). Table of changes done by Researcher group

Participants were brought together in a plenary where each group was given time to present to the other groups the main points that have emerged from their problem tree, vision, network map and changes required to achieve their vision of project success.

Nhân vật	Thay đổi thực tế	KAS
Nông dân	Chấp nhận sử dụng máy sấy, Cnghi, B, T, bi mới, phức hợp...	KT: Vấn đề máy, áp dụng công nghệ TP: Sản xuất tập thể & áp dụng công nghệ mới KN: Biết sử dụng Cnghi, T, B
CS Nghiên cứu (Vn, Trng)	Đưa ra Công nghệ, T, bi mới, phức hợp	KT: Nên bắt đầu từ thực tế TP: ỹ thức chín thời gian trong các vùng chuyên gia Cnghi, T, B KN: Vấn đề máy sấy tạo công tác nghiên cứu thực tế
CS quản lý	Chức sách tài trợ	KT: Nên giữ ở mức độ vừa, nên đưa tập quản lý TP: Cần chú ý chi nhánh, vấn đề chi nhánh tự quản lý KN: Đưa ra chức sách hợp lý, biết hỏi
Người hàng	Chức sách tài trợ	KT: Hiểu rõ đơn vị cho vay TP: Tạo 4 Kênh cho vay tiền KN: Vấn đề lãi suất, hình thức
Đơn vị nghiệp vụ	Mô hình quản lý, đơn-lạc	KT: Nên bắt đầu từ thực tế TP: Hợp tác với bên cung cấp vốn KN: Mềm dẻo, linh hoạt trong quan hệ thương mại

The first day closed with participants coming together for a ‘go-around’ for each to briefly express what was important to them in the entire day (see Appendix 7).

Day 2, morning: Outcome Logic Models and Learning Alliance

The morning started with an exercise that introduces the outcome logic models. The groups formed small circles. With each participant's hands randomly holding another participants', the groups will have formed a knot which they then untied. The first group to untie themselves back into a circle wins. This exercise allowed participants to see which person/actor needed to change or move, then decide what effective strategy they will use so that they can untie themselves first.

From their work the previous day on changes needed to achieve their vision of success, participants generated an **outcome logic model**, in which each row describes an impact pathway as seen in the Template in Table 5. The outcomes logic model synthesizes the information from the Vision, Network Maps actors, and project entry points from the problem-opportunities tree. It describes who needs to change, how that actor's knowledge, attitude and skills (KAS) need to change, and what the project will do to make these changes happen, so that the project can achieve its vision.

Table 5: Template for outcomes logic model

Actor (or group of actors who are expected to change in the same way)	Change in practice	Change in Knowledge, Attitudes or Skills	What are/were the project's strategies for achieving these changes in KAS and practice?

Note: Each line in the table below contains an outcome hypothesis and impact hypothesis:
 1) That the strategy or strategies the project proposes will bring about the desired outcomes;
 2) That the outcomes, if realized, will contribute to livelihood impacts on the ultimate beneficiaries.
 The former are tested by the project's Monitoring & Evaluation, which is the project's responsibility. The latter will generally be tested by external ex-post impact assessment, either at or after the end of the project.

For the individual groups outcome logic models see spreadsheets in the Excel workbook (VTN_WS_Hanoi_Workbook.xls).

While the OLM from the four groups were synthesized the participants developed ideas how to further the regional post-harvest Learning Alliance see section 5. below.

The **impact pathways** generated by the groups were synthesized and presented by the regional facilitators. Participants then made comments and additions resulting in the Table 6 below.

Combined impact pathways to reduce postharvest loss in North Vietnam. (Insert here thoroughly translated/verified OLM synthesized from all four groups)

Explanations: 1=name of group, 2=name of group...

Bolded = Project intervention, normal = project can help facilitate, *italics = beyond the scope of the project*,

Actor (or group of actors)	Change in practice	Change in Knowledge, Attitudes or Skills	Strategies for achieving these changes in KAS and practice?
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Actor (or group of actors)	Change in practice	Change in Knowledge, Attitudes or Skills	Strategies for achieving these changes in KAS and practice?
Farmer	1. Usage of combine harvesters (1) (2) (3) (4) dryers (2) (4) + preservation tech. (hermetic packing - MAP) (4)	<ol style="list-style-type: none"> 1. Know how to operate combine harvesters, dryers (2) (3) (4) + using preservation tech. (4) 2. Change in habits of harvesting, manual preservation (2) (3) (4) and ready for new techniques (3) (4) 3. Know how to operate, simple adjustment, maintain machines (2)(4) (1) (4) 4. Invest, supporting capital (1) 5. Aware of benefit of using machines (1) 	<ol style="list-style-type: none"> 1. Build models for combine harvesters' performance (1) 2. Organise workshops, conferences; strengthen trainings (1) (3) (4) 3. Organise study tours for learning combine harvesters and dryers' models (3) (4) 4. Support for study tours models of farmers' joints to apply mechanization at big scale (3) 5. Support to form clubs, associations, groups with the same interests, learning alliance (1) 6. Build a network of market information. (1) 7. Level field by laser technology for convenient mechanization (including provide equipment and technical services) (1) (2) 8. <i>Build areas for commodity rice of household groups from 5 hectares up (2)</i> 9. Train on utilise post harvest waste for farmers (2) 10. Train on machinery operating technique and using effectively (3)(4)
Staff of agricultural extension services	1. Enhance skill of advanced tech. transfer (2)(1)	<ol style="list-style-type: none"> 1. Improve knowledge on features and effects of many types of machines (2) 2. Be enthusiastic, close to farmers (2)(1) 3. Stick to production demand and new advanced techs. (1) 4. Knowledge, words together with doings (1) 	<ol style="list-style-type: none"> 1. Support to train of trainers, methods of agr. extension services (1) by new method of exchanging up from grassroot level (2) 2. Cooperate to implement, expand, duplicate models of agricultural and industrial extension services (1) (2) (3)(4) 3. Organise study tours to learn experiences in – country and out of the country (1) 4. <i>Socialise agricultural extension services (1)</i> 5. Organise conferences and workshops (2)
Agricultural Cooperatives	1. Manage to implement the project models; bring machines and	1. Know how to build plans for using and managing of	1. Establish and develop services for providing, using and maintaining machines and

Actor (or group of actors)	Change in practice	Change in Knowledge, Attitudes or Skills	Strategies for achieving these changes in KAS and practice?
	equipment to agricultural production, storage and processing (2)	machines (2) 2. Strengthen roles, organising skill and production management of cooperatives (2)	equipment (2)(1)
Research organizations	1. Do research and design new proper machines (combine harvester, grain dryer) (2) (4)	1. Apply new technologies on research and designation of machines (2) 2. Change in attitude, towards rural areas and peasants (2) 3. Stick to production reality and farmer requirements (1) (4) 4. Broaden and lengthen applying possibility, increase production effects (1) 5. Update, improve knowledge, approach to technical innovations (1) 6. Be aware of the importance of equipment and technological transfer (4) 7. Be creative in practical condition	1. Organise workshops comprising 4 “houses” (researcher, manager, enterprise and farmer) for catching up real needs (about machinery and technology) (1)(2) 2. Provide information on post harvest advanced innovation from inside and outside of the country , support to cooperate in research harvest, post harvest technologies (processing, storage and preservation) suitable to each region (1) 3. Complete designation to bring more suitable machines (2) 4. Provide information about the project, activity chain (to researcher) (4) 5. Introduce technologies and equipment from countries having similar cultivation condition (4) 6. Collaborate on transfer foreign post harvest equipment and technologies – eg.: combine harvester from Japan, traw baler from Germany, Korea, to modify for using (4) 7. Support to build and perform equipment models (4)
Bank	1. Change in ways of approach to farmer; Reduce administration process; organise customers workshops (2) 2. Support to have lower interest loans (3)	1. Reach enough capital resource and in time disburse (2) (3) 2. Know about low capital condition of farmers (3) 3. Be professional in banking services (3)	1. <i>Increase ration of capital lending and increase time to lend (2)</i> 2. <i>Low interest (2)</i> 3. <i>Survey, assess needs to lend money from farmers (3)</i> 4. Provide information about equipment investment(4) 5. <i>Recommend on supporting loans using with suitable periods (4)</i>

Actor (or group of actors)	Change in practice	Change in Knowledge, Attitudes or Skills	Strategies for achieving these changes in KAS and practice?
Enterprise, manufacture	1. Produce machines with good quality and price (2)(3)	<ol style="list-style-type: none"> 1. Well organise programs of customers care (2) 2. Know about the needs of farmers and cultivation conditions from each region (3) 3. Be able to produce tools with good quality and reasonable prices (3) 4. Be able to respond quickly to the needs of farmers (3) 	<ol style="list-style-type: none"> 1. Organise production and provide machines for farmers in time; build a network of machines insurance for farmers (2) 2. Provide manufactures with information about natural and cultivation conditions... and machinery needs of each locality (3) 3. Technical support through provision of document and study tours (3)
Manager	<ol style="list-style-type: none"> 1. Suitable and timely mechanism and policies (3) 2. Supporting policies (4) 3. Develop production, increase production effects (1) 4. Issue suitable mechanism and policies for PHT (1) 	<ol style="list-style-type: none"> 1. Understand the needs of farmers (3)(1) (4) 2. Cooperate, fully share with farmers (3) 3. Issue and adjust policies responsively (3) 4. Go towards the objective of commodity production (1) 5. Strategic vision (1) 6. Strict policy but still giving good condition for stakeholders to take part (4) 7. Bring suitable and flexible policies (4) 	<ol style="list-style-type: none"> 1. <i>Organise conferences, workshops about PHT related policies for managing staff (at district and provincial levels)) (1)</i> 2. Establish learning alliance among 7 stakeholders (farmer, researcher, enterprise, communicator, banker, trade promotion association) (1) 3. Arrange study tours in and out country (1) 4. Support encouraging to duplicate models of preservation and combine harvester ... (1) (3) 5. Support encouraging to form joints of households, groups (3) 6. Provide information, assess the importance of projects (4)
Enterprises(traders) (4)	1. Broaden partnership (4)	<ol style="list-style-type: none"> 1. Catch up market information (4) 2. Cooperate for bilateral benefit (4) 3. Be flexible in trading relation (4) 	1. <i>Provide information about rice and paddy from the country and overseas (4)</i>

4. Furthering the Learning Alliance

Then, participants were introduced to the concept of a **Learning Alliance**, which is shown in Figure 4. They understood that the PIPA workshop represented the first stage in planning for a learning alliance.

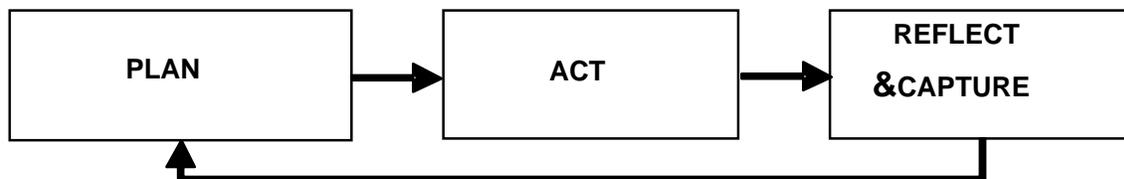


Figure 4: Learning Alliance repeated learning circle



Figure 5: Presenting one of the five guiding questions

In randomly selected multi-stakeholder groups participants discussed what a postharvest Learning Alliance in the North Vietnam might look like using four guiding questions.

- *Who should participate as a stakeholder and what could be their role?*
- *What could be topics of interest to be discussed in further detail among members of the Learning Alliance?*
- *How can we share what we learn and how can we capture and document what we learn?*
- *What are necessary next actions (for individuals as well as organizations)?*

Ideas were collected and generated in a World Café¹ Session, and brought together to populate the Learning Alliance concept for North Vietnam, see on question discussed in figure 8. Each question host reported back to the plenary the *key issues* discussed at his/her table. See below the results and outputs of the Learning Alliance session.

Following the training of the regional facilitating team and the national coordinators on participatory methodologies, in a discussion with the national coordinating team and the regional responsables it was agreed that the PIPA and in particular the learning alliance as a mechanism for them to use (e.g. for monitoring and learning) was done

What do we share - Topics?

- Information of machines for post harvest activities (dryers, rice combine harvesters)
- Knowledge about postharvest, product quality and rice market
- Forming household alliances to get better production
- Learning about rice combine harvesters
- Post harvest losses in Red River delta
- Marketing, establish trade mark
- Experience in management, and in:
 - o changing cultivation and harvest habits;
 - o information store and transfer to farmers;
 - o investigation of farmer's demand;
 - o setting up demonstration models
 - o agricultural extension activities of new postharvest technologies,
 - o utilization of postharvest by-products (for mushroom cultivation, animal husbandry;
 - o market information dissemination and market promotion,
 - o establish LA among managers, researchers, entrepreneur, bank, farmers, etc.;

3 KEY ISSUES

- *Knowledge on PH, and PHT (harvester, storage)*
- *Utilization of by-products (postharvest)*
- *Market: quality required from buyers*

¹ See <http://www.kstoolkit.org/The+World+Cafe>

Who (stakeholders) should participate?

- NGOs
- Woman association, farmer association, youth association
- Banks and Private Sector
- Farmers from different provinces
- Institutions: researchers from VIAEP, Institute of Food Crops, lecturers from Hanoi University of Agriculture, Nong Lam University, etc.
- Governmental staffs from governmental agencies: Ha Nam Department of Agriculture & Rural Development (DARD), Ninh Binh Agency of Agriculture & Rural Development (AARD), Nam Dinh DARD, Nam Dinh AARD, Hung Yen DARD, Thai Binh DARD, Thai Binh AARD, Vinh Phuc DARD, Bac Ninh DARD, Ninh Binh DARD, Ha Noi DARD, Hanoi Center of Agricultural Extension

And what is their role?

- Transfer: technology, knowledge, new research findings in PHT: VIAEP, universities
- Policy supports: Government authority at levels (central, provincial, district)
- Credit supply: Banks
- Services supply and taking initiatives: Private sector
- Disseminate: NGOs, mass organizations
- Apply PH technology, disseminate, feedback: farmers

How do we share our learning?

- Discussion, sharing, publishing, organization of workshop, seminar, training courses for farmer and models for demonstration
- Training course on technology for governmental staffs; Guide on document sources and information searching for farmers
- Building technical websites and upload information to these websites regularly, e-library, market information network
- Propaganda through public media (radio, TV, press) and distribution of leaflet, book, magazine, papers, etc.
- Propaganda to household about post harvest experience from training courses
- Financial support for buying computers and equipment
- Training courses for upgrade ability
- Putting bulletin in public locations (open market, post office, village people' committee, etc.)
- Providing information rapidly to farmer through agricultural extension staffs

3 KEY ISSUES

- *Workshops, training courses for stakeholders + leaflet, handbook, bulletin*
- *Mass media, web-sites: PHT and market information*
- *Extension staffs*

How do we document our learning?

- Using internet, computers, public media, publishing press, books, etc.
- Investigation and evaluation of detailed demands, summarization of needed information

3 KEY ISSUES

- *Internet*
- *Books*
- *Reports*

What action is needed (Next Steps)

- Organize clubs for learning foreign language, entertainment, field visit ...
- Organize training courses on post-harvest management and knowledge
- Exchange and learn experience of post harvest activities
- Organize workshop on demonstration of equipment and machine models
- Set up associations of farmers, association of farmers, researchers and governmental administrators.
- Receive advanced equipment and machines
- Annual meeting to help each other and exchange and update information, experience as well
- Set up connections, cooperation with related organizations of agriculture and rural development.
- Marketing, building trade mark for local product toward higher economic efficiency.

5. Next steps

The regional coordinator then gave a workshop summary and in a plenary brought out with the participants the possible next steps to be taken in the region (Table 8):

Table 8. Next steps to be taken in the region (Insert next steps here)

What activities to take	Who	When
<ul style="list-style-type: none"> - Suggest to the Dept. Of ARD to lead Center for Agr. Extension to build models of field levelling by laser technology - Organise trainings on application of new technologies on PH; method of preservation that IRRI did in Thai Nguyen 	Sub-Dept. Of Agriculture and RD Nam Dinh	11-12/2009 Every year/ month 9
<ul style="list-style-type: none"> - Guide Division of Agr. of districts to organise trainings for farmers on seed storage and preservation - Guide Division of Agr. of districts to have models of combine harvesters 	Dept. Of Agriculture and RD Thai Binh	10/2009
<ul style="list-style-type: none"> - Exhibit combine harvesters of Korea and Vietnam - Build models of mechanization from land preparation to harvest - Agr. Extension services: link PH technology guidance with preservation and pre-processing 	Dept. Of Agriculture and RD Vinh Phuc	9/2009 12/2009- quarter 2010 10/2009
<ul style="list-style-type: none"> - Trainings on PH - Build models of high quality rice: level land by laser technology, apply new technologies: combine harvester, dryer... 	Dept. Of Agriculture & RD Hanoi	12/2009 2010
<ul style="list-style-type: none"> - Suggest to organise trainings for farmers on rice storage and preservation, new technology application, how to use machines, how to utilise PH waste (mushroom plan) 	Dept. Of Agriculture & RD Ninh Binh	2010
<ul style="list-style-type: none"> - Suggest to study tour on combine harvesters in other provinces - Organise training courses on defining the causes of PH losses - Suggest to build a learning alliance combining 4 factors - "houses": Government – Enterprise – Researcher - Farmer 	Dept. Of Agriculture and RD Hung Yen	12/2009-2010 10/2009 2010
<ul style="list-style-type: none"> - Suggest to build policies to support to buy combine harvesters, put concentrated areas in priority - Suggest to build trial models of advanced PH technologies: combine harvester, straw collecting - Lead Sub-Dept. Of ARD to organise trainings for farmers on rice storage, to build some professional cooperatives on rice harvesting and storage 	Dept. Of Agriculture and RD Bac Ninh	2010
<ul style="list-style-type: none"> - Cooperate with centers of agr. Extension services in provinces to participate in agr. Extension services, to introduce PH advanced technologies - Transfer PH technologies if required (modify if required) - Teach knowledge on PH technologies to students 	Hanoi University of Agriculture	Every year, month 10
<ul style="list-style-type: none"> - Continue to exhibit model of mechanization from land cultivation to harvest at small scale and bigger scale in the next year 	Research Institute for Food Crops	2010
<ul style="list-style-type: none"> - Continue to exhibit model of mechanization from land cultivation to harvest at small scale and bigger scale in the next year - Make markets for some machines and equipment: combine harvesters, dryers ... - Organise trainings on rice PH 	VIAEP	From 8/2010 9/2009 2010
<ul style="list-style-type: none"> - Distribute models of dryers with different capacities, transfer technology - Suggest to IRRI to organise study tour groups in province/inter-province about advanced models, PH technologies; or support to build models of MAP and field land leveling - Upload information on PH from regions on websites 	Nong Lam University	Continuing 10/2009 11/2009

6. Participants' possible contributions (Self assessment)

The participants were then asked to reflect on the outputs of the workshop, how and what they think they themselves as individuals and their institutions can contribute to the project. The responses included the whole range from the application of new technologies by farmers, out-scaling through being model farmers and providing extension services to scaling-up and passing resolutions that favor postharvest development (Table 6: **Self assessment of participants with respect to what and how they can contribute to the project** (Insert here translation of self assessment of participants with respect to what and how they can contribute to the project

	Name of Participant	What/How they can contribute to the project
Ha Noi	Nguyen Thi Bich Thuy (HUA)	Provide infor. about PHT Participate in trainings and transfer
	Nguyen Xuan Thiet (HUA)	Cooperate in research and transfer combine harvester, dryer and technologies of processing and preservation
	Nguyen Thi Duong Nga (HUA)	Facilitate the establishment of learning alliance. Baseline survey of post harvest practices at farm level in North Vietnam.
	Tran Phuong Nga (VIAEP)	Provide document about trainings Trainings participations and exhibitions
	Nguyen Thi Lan Huong (VIAEP)	Disseminate experience on PHT Synthesize information, knowledge, and document about PH
	Nguyen Thi Ha (VIAEP)	Can be as a trainer on trainings about PHT Contribute to transfer rice processing technology
	Tran Thi Mai (VIAEP)	Train on PH, PHT transfer, Establish Learning Alliance
	Nguyen Thi Thoa (Hanoi DARD)	Distribute new knowledge about PHT to colleagues Propose to bring new PHT innovation to application
	Nguyen Hong Ngot (VAAS)	Participate enthusiastically in transferring and applying of new technologies Provide information and knowledge for farmers when bring models to them
Bac Ninh	Duong Duc Hong Tuan (DARD Bac Ninh)	Provide related information to the project Participate and collaborate with project to implement the project's content of PH
	Nguyen Duc Hien (DARD Bac Ninh)	Provide information about rice production in Bac Ninh province; about agricultural supporting policies
Ninh Binh	Tong Van Dung (Ninh Binh)	Can participate in training and distributing rice PHT for farmers so they can apply effectively
Vinh Phuc	Tran Thi Thu Hang (DARD Vinh Phuc)	Can guide and train to producers Provide the latest information to farmers Participate in transferring new technologies to producers
	Nguyen Van Dinh (DARD Vinh Phuc)	Directly participate in implementing and exhibiting models of combine harvesters and models of mechanization from land preparation to harvest
Hung Yen	Trinh Kim Uyen (DARD Hung Yen)	Share information of province on machines and equipment about rice PH
	Le Van Thang (DARD Hung Yen)	Disseminate PH information to producers
Thái Bình	Thieu Thi Thu Hang (DARD Thai Binh)	Can participate in training and distributing rice PHT for farmers so they can apply effectively

	Name of Participant	What/How they can contribute to the project
	Nguyen Thi Hien (DARD Thai Binh)	Take part in workshops
	Le Thi Thanh Ngan (DARD Thai Binh)	Bring objectives of the project to locality Update PH technologies to apply in locality Continue to update information to distribute to farmers
Nam Dinh	Nguyen Van Thu (Nam Dinh)	Tell farmers about the outcomes of the project
	Nguyen Ba Tuoc (Nam Dinh)	Disseminate knowledge just acquired to farmers in my cooperatives
	Nguyen Van Truong (DARD Nam Dinh)	Disseminate knowledge just acquired to farmers Convince my leaders to support to achieve objectives of the project
HCMC	Phan Hieu Hien (NLU)	Contribute in establishing learning alliance about PH
	Bui Ngoc Hung (NLU)	Be as a connector for learning alliance

). This provides a good starting point the initial activities in the provinces.

Table 6: Self assessment of participants with respect to what and how they can contribute to the project (Insert here translation of self assessment of participants with respect to what and how they can contribute to the project

	Name of Participant	What/How they can contribute to the project
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	Nguyen Thi Duong Nga (HUA)	Facilitate the establishment of learning alliance. Baseline survey of post harvest practices at farm level in North Vietnam.
	Tran Phuong Nga (VIAEP)	Provide document about trainings Trainings participations and exhibitions
	Nguyen Thi Lan Huong (VIAEP)	Disseminate experience on PHT Synthesize information, knowledge, and document about PH
	Nguyen Thi Ha (VIAEP)	Can be as a trainer on trainings about PHT Contribute to transfer rice processing technology
	Tran Thi Mai (VIAEP)	Train on PH, PHT transfer, Establish Learning Alliance
	Nguyen Thi Thoa (Hanoi DARD)	Distribute new knowledge about PHT to colleagues Propose to bring new PHT innovation to application
	Nguyen Hong Ngot (VAAS)	Participate enthusiastically in transferring and applying of new technologies Provide information and knowledge for farmers when bring models to them
Bac Ninh	Duong Duc Hong Tuan (DARD Bac Ninh)	Provide related information to the project Participate and collaborate with project to implement the project's content of PH
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Ninh Binh	Tong Van Dung (Ninh Binh)	Can participate in training and distributing rice PHT for farmers so they can apply effectively
V	Tran Thi Thu Hang	Can guide and train to producers

	Name of Participant	What/How they can contribute to the project
	(DARD Vinh Phuc)	Provide the latest information to farmers Participate in transferring new technologies to producers
	Nguyen Van Dinh (DARD Vinh Phuc)	Directly participate in implementing and exhibiting models of combine harvesters and models of mechanization from land preparation to harvest
Hung Yen	Trinh Kim Uyen (DARD Hung Yen)	Share information of province on machines and equipment about rice PH
	Le Van Thang (DARD Hung Yen)	Disseminate PH information to producers
Thai Binh	Thieu Thi Thu Hang (DARD Thai Binh)	Can participate in training and distributing rice PHT for farmers so they can apply effectively
	Nguyen Thi Hien (DARD Thai Binh)	Take part in workshops
	Le Thi Thanh Ngan (DARD Thai Binh)	Bring objectives of the project to locality Update PH technologies to apply in locality Continue to update information to distribute to farmers
Nam Dinh	Nguyen Van Thu (Nam Dinh)	Tell farmers about the outcomes of the project
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HCMC	Phan Hieu Hien (NLU)	Contribute in establishing learning alliance about PH
	Bui Ngoc Hung (NLU)	Be as a connector for learning alliance

7. Workshop monitoring and evaluation

At the end of Day one people were asked to give a brief statement of how they think the day went for them. The most important thing – good or bad – what they liked or for the facilitation team to improve. Most of the comments were positive like, *the approach/method of the workshop, which creates chances for all participants to speak, to ask, answer, argue and exchange ideas related to PH losses and PH technology, and make them work together.* People also appreciated *useful information provided along the workshop, PH net work, PH losses.* Participants were happy to *find opportunities to collaborate with others.* However, participants commented that *it should have been longer time for the workshop's activities.* For detailed statements see Appendix 7.

At the end of the workshop a simplified After Action Review was done with the focus for the feedback on 'what to improve?' and what 'worked well?', and a dart board evaluation checking how much for the objectives we targeted were achieved (*Clarify project objectives and regional plan, Identify key stakeholders and foster ownership, Identify project's impact pathways OLM, Clarify the LA*), and some additional administrative and logistics were asked how much participants were satisfied and content with the workshop (*Venue, Organization + Facilitation, Methodology PIPA, part. Approaches, Materials provided*).

Some selected comments on 'WHAT TO IMPROVE' were e.g. *workshop duration should be increased, especially time for exercises; concept and examples of learning alliance should be explained in more detailed; workshop materials should be sent earlier; or workshop room*

should be larger. Some examples of comments on 'WHAT WORKED WELL' are: new and excellent methodology (which promotes ability, brain power of individual and team); lively programs which made people feel excited and friendly; good logistics; Instructors/facilitators and organization team were enthusiastic, friendly to participants.

In the dashboard evaluation overall 62% of the participants' marks indicated that we have hit the target, top score of 3 for the given criteria and 36% voted for the score of 2, and 2% were marked y in the outer circle, for a detailed listing of the evaluation criteria see appendix 7.

Appendices

Appendix 1: Key information about the new ADB funded project and its linkages

ADB Reta No. 6489

Title:	Bringing about a Sustainable Agronomic Revolution in Rice Production in Asia by Reducing Preventable Pre- and Postharvest Losses
Timeframe of project design:	5 years
Approved by ADB:	Initial phase to be implemented within 1-2 years
Funding ensured:	1 year
Project start:	November 2008

Project sub components

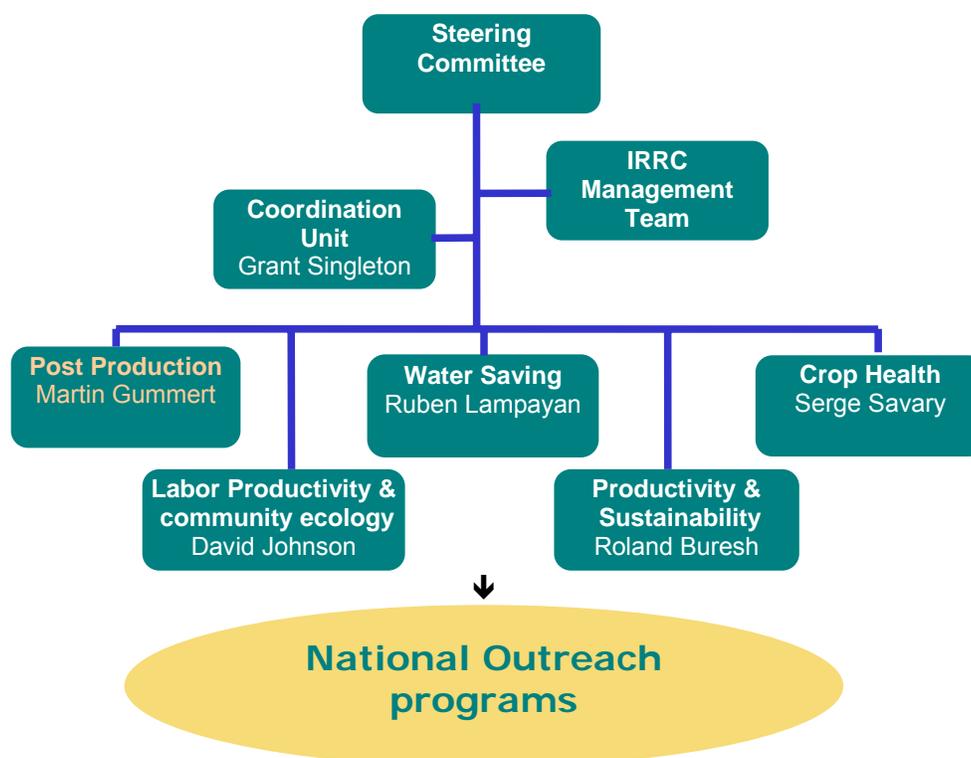
ADB Reta No. 6489, IRRI component	Subcomponent 2: Reducing postharvest losses and increasing income by producing better-quality rice.	Subcomponent 2: Reducing postharvest losses and increasing income by producing better-quality rice.
Countries	China, Thailand and Vietnam	Cambodia, Philippines and Vietnam
Timeframe	5 years, 1-2 year inception phase	5 years with a 1-2 year inception phase 10 years for wide scale impact
Approach	Mainly research Some field trials Multi stakeholder meetings	Outreach to min. of 300,000 of farmers Impact pathway orientation Learning alliance platforms

Postharvest sub component of the ADB Reta No. 6489

- **Objectives**
 - The **reduction of postharvest losses** by wide scale out-scaling postharvest interventions that were piloted in the previous ADB/JFPR 9036 project in Vietnam and Cambodia.
 - Increasing farmers' incomes from their rice harvests.
 - Strengthening national public and private **extension systems**
 - For rice farming communities (agricultural extension)
 - For manufacturers of postharvest equipment (industrial extension).
 - Facilitate a **policy dialogue** for sustainable development of PH sector
- **Goals, in line with national policy and MDGs**
 - Contribute to **food security** nationally and globally
 - **Poverty reduction** in poor rice farming communities

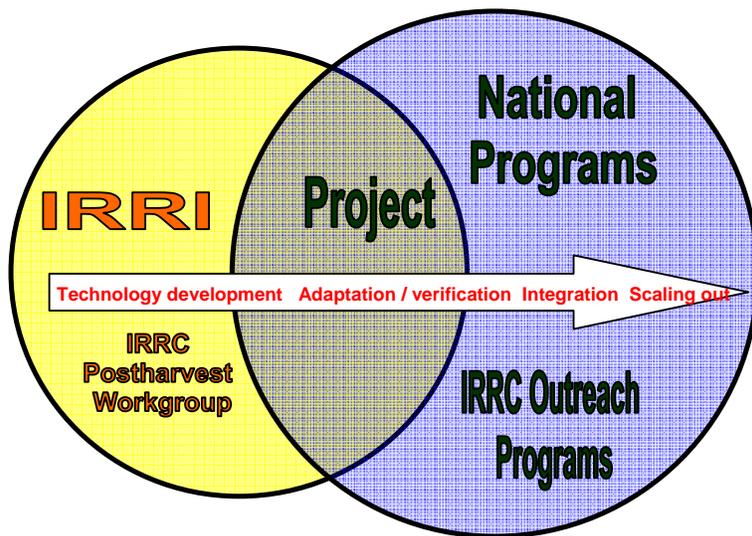
IRRC country outreach programs (ICOPs)

At IRRI we consider the new ADB Reta No. 6489 postharvest component as complementary to the Postproduction Workgroup of the Irrigated Rice Research Consortium (IRRC). The IRRC is a consortium consisting of IRRI and NARES in Southeast Asia working on best agricultural practice in five problem oriented workgroups. The consortium is coordinated by a Coordination unit, which also supports the work groups with socio economic expertise, baseline and impact studies etc. The Postproduction Workgroup of the IRRC has activities in Viet Nam, Lao, Myanmar, Indonesia, Cambodia and the Philippines and through this consortium the ADB project will be linked with a bigger international postharvest network for information exchange and cross country technology transfer.



How to reach out to thousands of farmers?

How do we envision to reach hundred thousands of farmers? The project does not have the resources to finance wide-scale in-country extension activities. It is also not the purpose of the project to fund national extension activities or re-place national institutions with extension mandates. Instead the project will add value to national programs by using the approach championed by the IRRC where the project will feed into national extension and outreach programs. This is shown in the simplified diagram below. The yellow circle constitutes the postharvest activities at IRRI and in the IRRC Postharvest Workgroup, where mainly technology and methodology development takes place. The blue circle represents the partner country, in this case the North Vietnam, which usually has many own national extension and outreach programs for technology verification, integration and scaling out. These national programs are implemented with own funding or supported by other donors. The ADB Reta No. 6489 Postharvest project is represented by the overlap in grey. These are the joint activities mainly on technology and methodology adaptation and verification which are directly supported with project resources as listed under “Project contribution”.



Project contribution

- Training at IRRI
- Training in country
- Studies
- Facilitation and coordination (Learning alliances)
- Technology concepts,
- Cross country technology transfer
- Pilots in selected sites
- Extension methodology development
- Business model development
- Support for local team
- Capture the learning and make it available

It needs to be understood that we will not reach the targeted number of end users with the project resources alone. The project will rely on these national outreach programs for a wide scale dissemination of the postharvest technologies. A key task of the project management will therefore be to engage with these outreach programs and evaluate options and foster collaboration. This also will require a dialog on the decision making level so that national resources can be allocated to outreach activities that include the projects technologies and methodologies.

We propose the Learning Alliance as a multi stakeholder platform for this engagement.

Basket of interventions to choose from

Based on the previous ADB/JFPR 9036 and the IRRC Postharvest activities in other countries the following technologies and management options are verified in farmers' fields and are available for inclusion in the project based on the still to be determined need of the end users in the target areas. New promising technologies can be included as well, which might need some adaptive research component.

- Mechanical harvesting (mini combine harvester)
- Mechanical drying (Flat bed dryer)
- Hermetic storage systems for seeds and grain
- Rice mill improvement
- Marketing assistance
- Understanding quality
- Training
- Policy dialog

(See also the slides presented during the first day.)

Outputs

The project has the following outputs based on the functions and inputs needed for a successful wide- scale introduction of improved postharvest management options.

- Output 1: Appropriate **postharvest technologies** (PHT) and improved PH management options are available to farmers and processors.
- Output 2: Country- and technology specific **agricultural extension methodologies** are developed and agricultural extension systems are strengthened.
- Output 3: **Business models** for improved PHT are developed, links to financing established and support market oriented production established.
- Output 4: National **outreach programs** include postharvest technologies and management options on a wide scale. .
- Output 5: National **learning alliances** capture the learning experiences and feed them into project management, **policy**, decision making, and extension.

Expected outcomes and impacts

We are expecting the following outcomes and impact from the project:

- Local manufacturers are producing equipment and adopting it to users needs and are getting the assistance needed in the adaptation.
- Improved postharvest equipment is available nation wide.
- Public and private extension systems are providing advice and training on postharvest technologies according to users needs.
- Postharvest chain actors have access to financing for purchasing equipment.
- National market info systems includes rice prices, timely data is available at the villages.
- Learning is captured and used in policy and decision making.
- Farmers sell more and better quality rice (300,000 in 3 countries within 5 years)

Activities

Activities will be planned and agreed on in annual planning meetings, for which the proposed Learning Alliance can provide a platform. The list below is included in the project document but will need to be discussed and fine tuned in the national context based on the need.

- Baseline studies, need assessments, impact pathway workshops
- Adaptive research to adapt technologies to end users needs
- Industrial extension: technology transfer to manufacturers, manufacturers training, production techniques, advisory service
- Agricultural extension: development of extension methodologies and materials, demos, training
- Workshops for cross country learning and technology transfer
- Training, capacity building
- Linking to support services (financing, markets, etc)
- Capture learning and make available in RKB
- Initiate and facilitate a Learning alliance

Guiding principles

Some of the guiding principles for the project are:

- **Need based value chain approach from harvest to market.**

Activities should be based on the actual needs of the end users for reducing losses and increasing their incomes. The project will consider interventions based on available technology options along the whole postharvest value chain and not focus on one simple operation.

- **Building entrepreneurial skills.**

Investment in postharvest means that a farmer often needs to make the transition from being a production focused farmer into being an entrepreneur using a business approach for investment in equipment and selling services (e.g. drying service) to others. The project will support this process.

- **National learning alliances embrace all relevant public and private stakeholders.**

The project will be inclusive and work with all key stakeholders in the value chain and not focus on one group only

- **Impact culture** established with impact pathway analysis and fostered through facilitation of learning alliance meetings

- **Make maximum use of existing knowledge**

Many technologies and methodologies are being used commercially in other countries. Rather than re-inventing the wheel the project will draw on existing solutions and assist with transfer and adaptation to local conditions.

Don't re-invent the wheel, facilitate cross-country learning and learning from the history

- **Building on and adding value to national initiatives**

- Work done and decisions made where they are done best
- IRRI building on and adding value to national initiatives
- (e.g. through IRRC outreach programs)

- **Letting go as stakeholders take over**

Appendix 2: Schedule of Workshop Series and responsible Partners

Dates	Location No. of WS, workshop	Responsible institution + acronym	Responsible person Supported by ...	Translator + email
21 st - 22 nd Jul.	My Tho WS 1	Sub-Institute of Agricultural Engineering and Post-harvest Technology SVIAEP	Pham Van Tan, PhD, Vice director of the Southern Sub-Institute of Agricultural Engineering and Post-harvest Technology (SIAEP), 54 Tran Khanh Du Street, Tan Dinh Ward, District 1, Ho Chi Minh City, Vietnam, tavisydnevy@yahoo.com.au , Tel: +(84.8) 3526 7192, Cell ph.: +(84) 126 5748 560 <i>Nguyen Duy Duc, Director the Southern Sub-Institute of Agricultural Engineering and Post-harvest Technology (SIAEP), HCMC, s.a.</i> ducnguyenduy2003@yahoo.com	Nguyen Phu Hoa, Aquaculture and Aquatic Resource Mgt., NLU phuhoa0203@yahoo.com , phuhoa0203@gmail.com
24 th - 25 th Jul.	Nha Trang WS 2	Nong Lam University NLU	Nguyen Le Hung, PhD, Vice Rector, NLU HCMC Mob: +(84) 913768957; Email: lehunqn@gmail.com Nguyen Van Xuan, MSc, Director, Centre of Energy and Agricultural Machinery NLU Mob: +(84) 918 002 312; Email: vanxuan310156@gmail.com Bui Ngoc Hung, PhD, Vice Dean, Faculty of Agricultural Engineering & Technology, Nong Lam University, Ho Chi Minh City hunqbuingoc@gmail.com Tran Van Khanh, MSc, Lecturer Centre of Energy and Agricultural Machinery NLU Mob: +(84) 903 737 498, Email: tvkhanh1958@yahoo.com.vn Dr. Phan Hieu Hien, Consultant, Nong Lam University, Ho Chi Minh City 091 312 7481 phhien1948@yahoo.com , phhien@hcm.vnn.vn	Truong Thuc Tuyen, Lecturer, Faculty of Food Science & Technology Nong Lam University, HCMC thuctuyen@hcmuaf.edu.vn , thuctuyentruong@gmail.com Nguyen Thi Hong Ngoc, Director, Ideal Agriculture Joint-stock Co.
27 th - 28 th Jul.	Hue WS 3	Hue University of Agriculture and Forestry HUAF	Dr. Do Thi Bich Thuy, Vice Dean, Faculty of Engineering and Technology, Hue University of Agriculture and Forestry (HUAF) chieuthuy64@yahoo.com Mr. Nguyen Quang Lich, Lecturer, Faculty of Engineering and Technology, HUAF ngqlich@yahoo.com , ngqlich@gmail.com	Ve Ouoc Linh, Department of Engineering and Technology, HUAF
30 th - 31 st Jul.	Ha Noi WS 4	Vietnam Institute of Agricultural Engineering and Post-harvest Technology VIAEP	Dr. Tran Thi Mai, Vice Director, Vietnam Institute of Agricultural Engineering and Post-harvest Technology (VIAEP) tranthimai05@yahoo.com Dr. Nguyen Thi Duong Nga, Lecturer, Faculty of Economics and Rural Development, Hanoi University of Agriculture ngatd@hua.edu.vn , ngantd@gmail.com	Dinh Thi Tam, Vice Head Division of Science, training and International Cooperation, VIAEP dinhthamvn2002@yahoo.com
3 rd -4 th Aug.	Can Tho WS 5	CanTho University CTU	Dr. Nguyen Ngoc De, CanTho University, Farming Systems nnde@ctu.edu.vn Dr. Vu Anh Phap, Lecturer, Can Tho University Email: vaphap@ctu.edu.vn ; cell ph.: 098600616	Please add translators details as soon as available

Appendix 3: Agenda

Time min.	Description of topic and activity
	<i>Day 1</i>
15	Registration
15	Welcome remark by host DARD and host institution
15	Introductions
15	Participants introduce themselves
30	Workshop Objectives
30	Participants' Expectations of the workshop
15	New PH project, objectives, proposed outputs, linkages to other programs
45	Overview (updated) on PH sector in Viet Nam (by Phan Hieu Hien)
15	Overview (updated) on PH sector in the Region (by host institution)
5	Housekeeping issues (by the host)
25	<i>Coffee and picture taking</i>
15	Introduction to Impact Pathways Learning Alliances
45	Drawing PH regional problem trees and identifying potential project leverage points (working in stakeholder groups): To clarify and communicate the project rationale in terms of the problems it is addressing, and how solving these problems will contribute to eventual impact
	<i>Lunch break</i>
30	Develop vision of project success: The different stakeholder groups describe their visions of the types of changes they wish to see by 2013, that the project might contribute to
15	Introduction to networks: Participants become familiar with key concepts related to social networks
55	Construction of 'now' networks (a form of institutional analysis): Groups map how they see the current PH network in their region/province
20	<i>Coffee</i>
30	Identification of main (network) changes required: Groups identify key relationship changes required to achieve their respective visions, and identify concrete actions to bring them about
90	Plenary presentation of PH problem trees, opportunities and visions, groups' network maps and identified changes: (1,5 hr) Participants gain a better understanding of each others' problem analyses and visions for the PH sector in their region/province, the PH sector, as seen by others.
30	Wrapping up of the day
17:00	<i>End of the Day 1</i>

	<i>Day 2</i>
15	Check-in
60	Development project impact pathways: Participants prioritize changes required to reduce PH losses based on other workshop outputs in the form of an outcomes logic model

Time min.	Description of topic and activity
60	Plenary presentation and discussion of the impact pathways for the region and provinces: Participants attempt to reach consensus on main opportunities for reducing PH losses available to the project, and the prototyping and learning required to realize them
25	<i>Coffee</i>
60	Discussion of how the Learning Alliance concept might work as a platform for prototyping and shared learning: Participants give input and reach common understanding of how the Vietnamese Postharvest Learning Alliance might work in their region
60	Discussion Next steps (activities that can be implemented until mid 2010) Each participants contribution
50	Workshop evaluation
13:30	<i>End of the Day 2</i>
	<i>Lunch</i>

Appendix 4: List of participant**Participatory Impact Pathway Analysis Workshop Participants, 30-31, 114 Truong Chinh, Ha noi, Vietnam**

TT	Name	Designation	Office	Email	Mobile phone
1	Vu Van Phong	Head of department	Ha Nam Department of Agriculture & Rural Development (DARD)		0912164437
2	Tong Van Dung	Extension staff	Ninh Binh Agency of Agriculture & Rural Development (AARD)	Dungtong.ptnt@gmail.com	0983572935
3	Nguyen Ba Tuoc	Farmer	Farmer in Yên Khang – Y Yen – Nam Dinh p		
4	Nguyen Van Thu	Farmer	Farmer in Yên Phong – Y Yen – Nam Dinh		0975934969
5	Nguyen Văn Linh	Farmer	Farmer in xã Hai Phuong - Hai Hau - Nam Dinh		0943051230
6	Nguyen Thi Thu Hang	Head of department	Vinh Phuc DARD	Thuhang208@gmail.com	0915064077
7	Đo Hoang Thanh	Extension staff	Hanoi Center of Agricultural Extension		0912432167
8	Tran Tri Hoan	Director of institute	Food Crop Institute, VAAS		0912002458
9	Pham Đức Hưng	Head of department	Food Crop Institute, VAAS	hungvica@yahoo.com	0904372978
10	Nguyen Thi Hong Ngot	Researcher	Food Crop Institute, VAAS		09761212541
11	Nguyen Bich Thuy	Teacher	Hanoi University of Agriculture (HUA)		0989589497
12	Tran Lan Huong	Teacher	HUA		0912675478

TT	Name	Designation	Office	Email	Mobile phone
13	Nguyen Xuan Thiet	Teacher	HUA	ngxthiet@yahoo.com	0912120276
14	Tran Thi Phuong Nga	Researcher	Vietnam Institute of Agricultural Engineering & Post-harvest Technology (VIAEP)	phuongngaphti@yahoo.com	0989084979
15	Nguyen Thi Ha	Researcher	VIAEP	Hathi58@yahoo.com.vn	0912371158
16	Nguyen Hai Nam	Extension staff	Ha Nam DARD		0948315789
17	Nguyen Thi Vang	Head of department	Ha Nam DARD	Vangnt63@gmail.com	01696924563
18	Nguyen The Truong	Head of department	Nam Dinh DARD	Nthetruong05@gmail.com	0983200488
19	Nguyen The Vinh	Extension staff	Nam Dinh AARD		0914530048
20	Trinh Kim Uyen	Extension staff	Hung Yen DARD	trinhkuyen@gmail.com	01682310417
21	Le Van Thang	Extension staff	Hung Yen DARD	thanglevanhy@gmail.com	0912101897
22	Nguyen Van Tam	Head of department	Hung Yen DARD		0906232337
23	Tran Thi Thu Hang	Extension staff	Thai Binh DARD		0912722681
24	Nguyen Thi Hien	Head of department	Thai Binh DARD	Hahien1989@gmail.com	0914963094
25	Le Thi Thanh Ngan	Extension staff	Thai Binh AARD	Thanhngan82@gmail.com	0915171849
26	Truong Quang Bang	Extension staff	Vinh Phuc DARD		0982357568
27	Nguyen Van Dinh	Extension staff	Vinh Phuc DARD	Dinhnv51@yahoo.com.vn	01693991324

TT	Name	Designation	Office	Email	Mobile phone
28	Duong Duc Hong Tuan	Extension staff	Bac Ninh DARD	Hongtuan_vp@yahoo.com	0988657875
29	Nguyen Duc Hien	Extension staff	Bac Ninh DARD		0982976477
30	Pham Hong Le	Extension staff	Ninh Binh DARD		0914178014
31	Nguyen Thi Thoa	Head department	Ha Noi DARD	Khanhthoa129@gmail.com	0915652440
32	Nguyen Thi Lan Huong	Researcher	VIAEP	Ntlanhuong77@yahoo.com	0982381242

Support/Administrative

Name	Organization	Agency Position
Vu Dao Tue	VIAEP	Staff
Nguyen Van Quyet	VIAEP	Staff
Tran Thanh Mai	VIAEP	Staff
Nguyen Thu Hang	VIAEP	Staff

Facilitators

Name	Organization	Agency Position
Tonya Schuetz	IRRI	Facilitator
Rica Flor	IRRI	Facilitator
Nguyen Hieu Hien	NLU	Lecturer
Nguyen Ngoc Hung	NLU	Lecturer
Tran Thi Mai	VIAEP	Facilitator
Nguyen Thi Duong Nga	HUA	Facilitator
Dinh Thi Tam	VIAEP	Facilitator
Nguyen Lan Huong	VIAEP	Facilitator
Dinh van Chau	VIAEP	Facilitator

Appendix 5: Abbreviations and terms used in network maps

No	Acronym	Full Name	Location
1	ACO, HTX NN, HTX nông nghiệp	Agriculture Co-operative	Communes
2	ADB	Asia Development Bank	Philippines
3	Bank, NH	Bank	Hanoi, Provinces
4	BKHDT	Ministry of Planning and Investment	Hanoi
5	Bộ Công thương	Ministry of Commerce and Industry	Hanoi
6	Bộ TNMT	Ministry of Resource and Environment	Hanoi
7	CDTQG	Bureau of National Reservation	Hanoi
8	CKNN	Enterprise of Agricultural Mechanization	Provinces
9	Cơ quan truyền thông	Media organization	Provinces
10	CQLCL	Department of Quality Management	Hanoi
11	CSCB	Processing enterprise	Provinces
12	CT, DNTT	Companies, Enterprises trading agro-products	Provinces
13	CTT	Department of Cultivation	Hanoi
14	Cục CB, CBNLSM	Department of Agro-processing, forestry products and salt production.	MARD, Hanoi
15	Doanh nghiệp, DN	Enterprise	Provinces
16	DPC	People Committee of District	District
17	FAO	Food and Agriculture Organization	Office- Vietnam
18	Hội nông dân, HND, FGs	Association of Farmers	Communes
19	Hội phụ nữ	Women Union	(Generic)
20	HUA, ĐHNHN, DHNNI (HUA),	Hanoi University of Agriculture	Hanoi
21	IRRI	International Rice Research Institute	Philippines
22	MARD, Bộ NN, BNN	Ministry of Agriculture and Rural Development	Hanoi
23	MOF	Ministry of Finance	Hanoi
24	MOST	Ministry of Science and Technology	Hanoi
25	ND, Nông dân,	Farmer	
26	NHCS, NHCSXH	Social Policy Bank	Hanoi, Provinces
27	NHNN	Bank for Agriculture & Rural Development	Hanoi, Provinces
28	ODA	Official Development Assistance	Generic
29	Phòng NN huyện, Phòng NN và PTNT, PNNH	Division of Agriculture and Rural Development	Provinces
30	Sở KHĐT	Dept. of Planning and Investment	Provinces
31	Sở KHCN, SKHCN	Dept. of Science and Technology	Provinces

No	Acronym	Full Name	Location
32	Sở NN PTNT SNN&PTNT	Department of Agriculture and Rural Development	Provinces
33	Sở TC	Dept. of Finance	Provinces
34	TCTT	Donor Organizations	(Generic, ADB, FAO...)
35	TGIA	Enterprise trading rice	Provinces
36	TTKN Quốc gia, TTKNQG, CKN	National Center for Agricultural Extension Service	Hanoi
37	TTKN,	Center of Agricultural Extension Service	Hanoi
38	UBND	People Committee	(Generic)
39	UBND Tỉnh	People Committee of Province	Provinces
40	UBND xã	Communal People Committee	Communes
41	VAAS	Vietnam Academy of Agricultural Sciences	Hanoi
42	VIAEP, Viện CD và CNSTH, VCD	Vietnam Institute of Agricultural Engineering and Post Harvest Technology	Hanoi
43	VKHKT	Department of Science, Technology and Environment	Hanoi

Appendix 6: Current postharvest network and vision

Research Group

NOW:

Lots of stakeholders form the network
Extension center is the most influential stakeholder.
Farmer is the key player to decide success of PH project
Appreciate two-way relationship between farmers and research institution, however these links are weak.
Appreciate supports from IRRI to farmers

AFTER 5 YEARS

Extension center takes the lead in transferring technology to farmers with the bottom-up approach.
Relationships between farmers and research institutions, DARD, Extension center are strengthened.
More technical assistances from IRRI

Farmers/Private Sector

NOW:

Farmer is the center
Ministry of Planning and Investment (MPI), National Extension Center (NEC), DARD, Banks and Cooperatives are the most important stakeholders
One way relationship between farmers with research institutions (HUA, VAAS, VIEAP)
Appreciate supports from IRRI

AFTER 5 YEARS

MPI will be more concerned of farmers, NEC and DARD, and cooperatives works together to transfer technology to farmers. Researchers will be closer to farmers to understand farmer's needs. Feedback from farmers are considered by corresponding stakeholders

Government Agencies Group 1

NOW:

Farmer is the central stakeholder, IRRI play key role for transferring PHT to farmers through the project.
Extension plays a very important role as extension workers directly transfer technology to farmers
Extension (at grassroot) is under district people committee, DARD. Therefore, supports from these stakeholders are crucial for extension in PHTs transfer.
IRRI plays crucial role in providing outputs that help farmers to reduce PH losses

AFTER 5 YEARS

Extension workers are closer to farmers, strengthened relationship between researchers and farmers. Government authority is more concerned of PH project

Government Agencies Group 2

NOW:

Farmer is the center

DARD and Banks are the most important stakeholders in the network

Most of relationships between farmers and other stakeholders are one-way, for example extension, manufacturers, Research Institutions

AFTER 5 YEARS

There will be two-way relationships between farmers and other stakeholders. So that farmers can participate in various activities related to their agricultural production, and hence address better farmers' needs

Appendix 7: Workshop monitoring and evaluation

“Go-around” at the end of Day 1 detailed responses of participants

- *Can exchange ideas, interact; more knowledge about stakeholders of the project*
- *Get more knowledge for distribution to farmers. Very satisfied*
- *Know more about the field of management. Can introduce for farmers how to reduce losses*
- *To know that there are so many ways to approach to PH losses*
- *Very impressed at the methodology of the workshop, especially breaking ice!!!!*
- *Interesting: an opportunity for exchanging ideas and information*
- *More knowledge for technology transfer work*
- *Excellent: methodology*
- *Know more about the current PH network. More information to distribute to farmers*
- *The content captured from the workshop can be directly used*
- *Very interesting methodology, can update information and interact with others*
- *Good methodology to find out a problem and draw a problem tree*
- *Can practical imagine stages of PH losses and find some solutions to reduce losses*
- *Know many new things about PH losses*
- *Know more about how to reduce losses*
- *Can have lots of information to tell other farmers in my cooperative*
- *Very interesting approach methodology for participants to capture knowledge easily*
- *Can know methodology to determine stakeholders for a successful project*
- *More understandings to disseminate to farmers*
- *Very interested in the methodology used in the workshop. With this methodology, PH is only a good example and can be expanded to other cases*
- *Have more useful information. SHOULD HAVE LONGER TIME*
- *Very impressed with the methodology, and it should be applied to many other workshops.*
- *In a very short time, can capture lots of experiences on workshop organization to finding out of PH losses. Find many opportunities to collaborate.*

Simplified After Action Review

WHAT TO IMPROVE	WHAT WORKED WELL
<i>Longer time (14) More time for exercises (4)</i>	<i>Methodology of organizing (20)</i>
<i>Too small workshop room (2)</i>	<i>New Methodology (PIPA) (20)</i>
<i>Should have some more singing and games (1)</i>	<i>Flexible, pleasant, good quality (5) Can learn lots of useful things (20)</i>
<i>Expand the elements of participants (1) including 4 stakeholders (farmers, traders, government, researcher) (1)</i>	<i>Ways of bringing problems and dealt with them (1)</i>
<i>More explanation on learning alliance. Give examples (2)</i>	<i>Brain storm learning (4) Creative, not stressful (2)</i>
<i>Need 2 breaks in a half day (1)</i>	<i>Everything is good (1)</i>
<i>Bring some disadvantages for participants to discuss (2)</i>	<i>Enhance one's self thinking (1)</i>
<i>Initially find out some solutions for PH problem - (1)</i>	<i>Friendly, openly (4) Lively program (20)</i>
<i>Send document to participants sooner (1)</i>	<i>Well organized, enthusiastic facilitators (15)</i>
<i>Content of the workshop should be more easily understood (2)</i>	<i>Ways of organizing (grouping, individual and team thinking) (2)</i>
<i>Time for a half day should be shorter (1)</i>	<i>Establish connections among participants (16)</i>

Dartboard Evaluation

1 = outside, 2 = middle, 3 = right on target	<i>Hanoi 30-31/07/2009</i>		
	<i>1</i>	<i>2</i>	<i>3</i>
<i>Clarify project objectives and regional plan</i>	0	7	14
<i>Identify key stakeholders and foster ownership</i>	0	9	9
<i>Identify project's impact pathways OLM</i>	0	8	11
<i>Clarify the LA</i>	2	7	10
<i>Venue</i>	1	7	10
<i>Organization + Facilitation</i>	0	1	22
<i>Methodology PIPA, part. Approaches</i>	0	7	11
<i>Materials provided</i>	0	10	10
<i>Field Trip</i>	-	-	-
Total	3	56	97
%	2	36	62