

## How did the activities benefit the students?



### What is action research?

Action research is a participatory enquiry approach that aims at making change. It can help you to empower a group of people to analyse their situation and to solve their problems. The methodology can bring you closer to the people concerned, and by asking them and discussing with them you can find out what their problems really are and how they can be solved. Then they can identify actions to improve the situation and to solve the problems. After that they can reflect on the actions and improve them.

#### Example:

In the case of our action research, we had the situation of many farmers working hard but still being poor. We assumed that the problem was that they were using too much chemicals and their returns were not enough to cover the costs of the chemicals. In order to know if our assumption was right and also to raise awareness of the villagers for the problem we interviewed them about their farming methods and discussed alternative ways of farming. Now after understanding the causes of the problem, they will try to implement the suggested changes and after some time we will be able to review if the situation is really improving.

### When is action research useful?

- ... Whenever you observe a problem affecting a group of people and you...
- ... want to get closer to the people facing the problem
- ... want to know more about the problem
- ... want to raise awareness for the problem
- ... want to change the current situation to solve the problem

### Who can use action research?

Everybody can use this methodology. Looking through this book you will find out how easy it is.

### Why were youths included in our action research?

Young people learn very quickly and are open-minded. They are better than adults. They can create a relaxed atmosphere during the interview, because people are less afraid to talk to the youth than to adults they don't know. Furthermore the youth themselves can learn a lot about interview techniques as well as about the situation of the people they are interviewing.

### Can youths really contribute to an action research?

YES, they can!!! In this comic book you can see how they did it!

How did we do  
this action  
research  
project?

In the comic book the Young Volunteers will show you all their training and action research activities in the field.  
But how did it all start? What was the reason for doing this action research? And how was it planned?  
The following pages describe the activities during the action research, from planning to the follow-up activities, with help from trainer and the research team. You can use this description as a manual for your own action research project.

Background

Lackhao village is located in Thateng District, Sekong Province in the South of Laos. Most of the inhabitants of the village are farmers selling their products for export. The main products are coffee and cabbage. Especially for the production of cabbage many chemical pesticides and chemical fertilizers are used, whereas the production of the coffee is mainly organic.

Near the village there is Thateng Organic Farm - a training center of PADETC providing trainings on organic farming. Even though the villagers have easy access to this farm they don't take advantage of this learning opportunity and continue to use chemical fertilizers and pesticides.

Negative impacts of the chemicals like health problems, water scarcity, deforestation and indebtedness of the villagers have already been observed and the village authorities requested help to address this issue.

PADETC decided to investigate the extent of the impacts of chemicals in farming in Lackhao village and to raise awareness of the topic with the villagers. An action research approach will meet the goal of investigating as well as of awareness-raising.

It was assumed that the farmers would feel uncomfortable if a group of highly educated researchers from the capital city descend on their village, asking them personal questions and making suggestions on how they can organize their life in a better way. Thus it was decided that the interviews should be conducted by secondary school students (Young Volunteers). The Young Volunteers will benefit as they can improve their observation skills, learn how to do an interview and deepen their understanding of ecological problems and living conditions of the farmers.

After deciding to conduct an action research together with Young Volunteers, our team from PADETC helped design the research and worked with the Young Volunteers to conduct this research.



During the planning period we had to prepare

1. the organizational part
2. the research methods
3. the questionnaire
4. the training

Planning

In the case of one farmer family the purchase of chemicals comprised even 85% of their overall expenses per year. In comparison the farmers spend on average only 12% of their expenses on food and 4% on health care.

Farmers growing coffee invested on average only 8% of their expenses in the coffee production.

42% of the interviewed families reinvested almost all their income to farming without making any profit. Most of them grow vegetables and spend a high amount of their income on chemicals.

The villagers themselves mentioned in the discussion that the low profit is the main problem in their community, followed by the poor sanitation and women's health problems, the weak resource management, and low education.



Questionnaire for the interviews in Lak Khao Village

Introduction, age of interviewee

1. What is the main plant that you are planting?
2. What is the second plant that you are planting?
3. How big are your fields in ha?
4. How many harvests do you have per year?
5. What do you add to the soil so that the plants grow better?
6. How many years ago did you start to use it?  
*If they use chemical fertilizer:*
  - a. Why did you start to use chemical fertilizer?
7. What do you add to the plants to protect them from insects and diseases?  
*If they use chemical or botanical pesticides:*
  - a. What is the name of the pesticides?  
*If the answer is a chemical pesticide*
    - b. How many years ago did you start to use it?
    - c. Why did you start to use it?
8. How many times per planting period do you use pesticides?
9. Which problems in farming did you observe over the last years?
10. What goods do you possess? (vehicle, quality of house, electronic devices)
11. What is your expenditure for *seeds and seedlings, fertilizer, pesticides, other people working for you, repayment of loans?* (This year and 5 years ago)  
What is your this year expenditure for *fuel, transportation, telephone, rice, food, health care, schooling, clothing, others* (specify: \_\_\_\_\_)?
12. How many kg of your products do you produce per year? (This year and 5 years ago)
13. How much do you earn per year when you sell your products?
14. What health problems did you or members of your family have during the last year?
15. What did you do when you or your family members were sick?
16. When you don't have money, what do you do? (Go to work for others, sell land, sell house, sell property)
17. What makes you happy?

they had to explain the questions and give examples so that the villagers would understand better. The volunteers had learned this kind of explanations during the training.



In addition to the interviews, some members of the research team worked together with the village officials to gather more socio-economic data about the village and to draw a map of the village showing forested areas and areas used for agriculture. The map would also display parts of the village's area used by surrounding villages.



The trainer and researcher team transferred the data into an excel-table and made some calculations. Then the results were summarized and visualized on cards and flipchart papers.



Presenting the data is the most important part of the action research as it is not the goal to collect data but to use the data to improve the situation of the people concerned. So we organized a meeting with the villagers the day after we finished the analysis. As a warm-up, the young volunteers performed some traditional Lao dances and songs as well as a play related to the use of pesticides that they had invented themselves.

After that the results of the interviews and the discussion with the village officials were presented to the villagers. This was followed by a discussion with the villagers about their situation, their problems and possible solutions.



An action research usually aims for changing and improving a situation. The activities described until here were just the starting point for the whole action research project to initiate activities to improve the situation of the farmers in Lackhao village. The other objective of the action research project is to foster the learning of the young volunteers in interview and research methods as well as in analytical thinking. Therefore, before the end of this field trip ongoing steps were planned in a participatory way with the villagers and the volunteers.

In the village a group of farmers were selected for a pilot project of organic farming. And the volunteers will do similar projects supporting their learning process after they go back.



The results fromf the data collection included information about the use of chemicals, the income and expenses of each family and their living conditions.

In summary we found out that chemicals were used only for growing vegetables. On an area of one hectare, the vegetable farmers would use on average 1-1.5 tons of chemicals per year. Coffee however is grown naturally. As fertilizer only cow dung is used.

The farmers invested on average 41% of all their expenses in the purchase of the chemicals.

### The organization

The planning period allowed us to be creative and to develop many ideas about what we wanted to do. Nevertheless it was important to think about the circumstances: we had a certain budget and that means also a certain amount of time. In order to see if all our plans were realistic we had to prepare a budget plan and a time frame. And of course we had to make appointments with the village authorities and with the Young Volunteers.

### The research method

There are many methods that could be used to analyse a question or a topic and to raise the target group's awareness. You can draw a map or walk around the village together with villagers to see the situation of the community. The most common methods however are using interview and group discussion. For both methods you have to prepare a questionnaire in order to ask the right questions that will help get meaningful answers and to ask the same questions in every interview or discussion.

In our case we decided to draw a map together with the village officials showing important features of the village. We also chose the interview method and decided to select 35 families and to interview the head of the family (female or male) using a questionnaire. At the end we would present the results of the research to the villagers and discuss the findings.

### Questionnaire

There is one main question that we want to answer from the action research project. In our case the question was: *“what are the impacts of the use of chemicals in farming in Lackhao village?”* To find the answer to this main question, we have to ask many different questions to many villagers. We had to think about these questions and write them down in the form of a questionnaire that could be used for the interviews.

When developing the questions, it was important to keep our objective and our main question in mind and reflect what information we need in order to answer our main question and what we have to ask to get this information.

We also have to think about who we wanted to interview and what kind of questions we could ask in this case. For example, we would like to ask if the people had health problems because of the pesticides, but the farmers would not know if their illnesses are the result of the pesticides or from other causes. Only doctors know that!

For our action research we also have to consider that the interviewers young volunteers without any experience in interviewing and filling forms. So the questionnaire has to be easy to understand. This means we will need to train the young volunteers so that they will learn proper interview techniques.

(On page 7 you will find a summary of the questions in our questionnaire to give you an idea of what we asked the villagers.)

3  
Data collection  
in cooperation  
with the village  
officials

4  
Analysing  
the data

5  
Presenting the  
data

Following  
activities

Results of  
the data  
collection



## The field trip

### 1 Training for the young volunteers

## Training

In planning the training for the 12 young volunteers we designed a training plan and divided the training tasks among several trainers. The training plan contained information about the activities, the learning goal for each activity and the time needed for each part of the training. The whole training lasted two days and comprised activities such as explanations, games, movies, presentations, role-plays, exercise and trial in the field.



The whole training itself can be divided into three parts: introduction, basic knowledge about chemicals and basic interview techniques. During the training we also added some energizers for ice-breaking.

## Basic knowledge about chemicals

Methods used:

1. **Explanation** was given by the trainer from Thateng Organic Farm.
2. **Watch movies** about health and ecological impact of chemicals in farming produced by WWF and Japan TV.
3. **Games**  
We chose to use the Toxic Waste Game to help the young volunteers to see the ecological impact of dumping chemicals.  
This game is also encourage teamwork, leadership, analytical thinking, problem-solving and communication.

### TOXIC WASTE

Avoid playing the game with groups at the early stage of group development. Playing the game outdoors is more dramatic because water can be used as the "toxic waste".

#### Preparation

1. A rope is used to create a circle of at least 3 meters diameters on the ground. This will represent the toxic waste radiation zone.
2. A small bucket is placed in the center of the radiation zone. Fill it with water to represent the toxic waste.
3. A large bucket is placed approximately 10-15 meters away. It will be used as a neutralizer.
4. The tools needed:
  - a. 1 x boundary rope ~12 m to create a circle of up to 3 m diameter
  - b. 8 x 3,5 m lengths of light cord
  - c. 1 x dynamic bungee cord loop
  - d. 2 x buckets (small and large).
5. Group sizes of approximately 7 to 9 are ideal, but the activity can be done with as few as 4 or as many as 12.
6. All the equipments i.e., bungee, and cords are put in a pile near the rope circle.

#### Instruction

1. The challenge for the participants is to work out how to transfer the toxic waste from the small bucket into the large bucket where it is "neutralized", using only the equipment provided and within a set time frame.
2. Assume that the waste will blow up and destroy the world after 20 minutes if it is not neutralized.
3. Anyone who ventures into the radiation zone will suffer injury and possibly even death, and spillage will create partial death and destruction.

4. The aim of the game is to save the world without injuring any group members.
5. The rope circle represents the radiation zone emanating from the toxic waste in the bucket.
6. The participants need to take some time for planning with no action e.g. 5 min. The facilitator starts the clock and indicates the time for action, e.g., 15 or 20 min, when they are ready.
7. If someone breaches the toxic waste zone, indicated by the circle, the facilitator enforces an appropriate penalty e.g., loss of limbs (hand behind back) or function (e.g., blindfolds if a head enters the zone) that lasts for the rest of the game. If the whole being enters the zone, he/she dies and must sit out until the end of the game.

Time: 30-50 minutes

## Basic knowledge of interview skills

Lesson taught:

1. Creating a good atmosphere for making an interview
2. Introducing themselves and the purpose of interview
3. Asking questions in such a way so the interviewee understands
4. Writing the correct and useful information
5. How to use the questionnaire

Methods used:

1. Role play to show a good interviewer and bad interviewer
2. Group discussion
3. Explanation
4. Practice to use questionnaire in pairs with assistance from trainer.
5. For the field practice; young volunteers are divided into two groups and go to two farmers to practice using the questionnaire.



### 2 Data collection by interviews

The interviews were conducted by 5 groups of young volunteers. In each group there were 2 volunteers and one adult from the trainer and researcher team.

The families that should be interviewed were chosen by the head of the village so that we would interview the same number of rich, middle class and poor families. We noticed that it was very important that the families were informed before the interview by the village officials or that one of the officials accompanied the group. Some families had not been informed and they felt very uncertain and didn't want to answer all the questions.

The groups visited the families in their house or on their field. First they introduced themselves, explained that they would like to ask some questions about farming and asked for permission to interview. It was very important that they created a good atmosphere at the beginning so that the interviewees felt comfortable and trusted the interviewers. The accompanying adults helped sometimes introducing their group as a group of students performing a school project.

Usually the volunteers shared the work in their group, so that one person would always ask the questions and the other would write down the answers. Often