



CHAPTER 2

Learning from the real working lives of local farmers and sugarcane processing workers in the Mekong Delta area in Viet Nam



This chapter describes how the WIND programme was born in the Mekong Delta area located in the south of Viet Nam. The WIND programme began with gaining an understanding of the real working lives of local farmers in the Mekong Delta and tried to strengthen their initiatives for improving safety, health and working conditions.

The authors' team studied real working and living conditions of local farmers intensively before the birth of the WIND programme. The team directly observed the real work of local farmers such as rice cropping, rice harvesting, or land preparation. These studies were valuable in order to understand the needs of local farmers in their work and their views for improvements.

Two technical institutes in occupational safety and health, the Vi Thanh Hospital School, Vi Thanh district, Cantho province (now Hau Giang province), Viet Nam, and the Institute for Science of Labour, Kawasaki, Japan, worked together with the aim of creating practical support measures to improve the working conditions of local farmers. They shared practical steps to understand the real work of local farmers and then devised the WIND programme. The course of the development of the WIND programme presents a useful model in international technical cooperation.

2-1. Understanding the real conditions of farmers' work

The two institutes, the Vi Thanh Hospital School and the Institute for Science of Labour, began their collaborative activities in 1991 when their staff visited many farms and rice fields to observe the real work of local farmers. The Vi Thanh Hospital School had long contributed to the health development of local farmers and their families and had established a good relationship with them. The Institute for Science of Labour as a research institute had developed practical safety and health risk assessment methodologies and training programmes to improve working conditions. The combination of the practical experiences of the two institutes became the basis for the birth of the WIND programme.

2-1-1. Observing farmers' work in field conditions

The team from the two institutes conducted a field observation study on the workload of farmers in a rice field in Vi Thanh district as their first collaborative step. The joint study team visited a rice field in Vi Thanh in the early morning as farmers started their work before the sunrise. The team selected a farm family and assigned each researcher to follow and observe one farmer. The study team applied a direct observation study method and recorded the work content and work posture of the target farmers every 30 seconds from the beginning of their work until the end. The team also interviewed the farmers every hour about symptoms of fatigue using the 30-item fatigue monitoring questionnaire developed by the Japan Society for Occupational Health.



Figure 2-1. A woman farmer had to maintain a forward bending posture when manually harvesting rice (left) and from time to time took pauses to stretch her back (right)

2-1-2. Safety and health improvement needs of rice farmers

Table 2-1 shows safety and health problems of rice farmers identified from the direct observation studies. Farmers' improvement needs were broad, including sustained

bending work postures (Table 2-2), carrying heavy materials through muddy rice field paths, unstable small bridges over canals, uncovered moving belts of threshing machines, insect and snake bites, and sharp edges of cut-off rice stalks. Welfare facilities such as provision of toilets and safe drinking water at work, or resting corners were also important needs. Women farmers had difficulties in finding appropriate toilets and refrained from urination.

Table 2-1. Examples of safety and health improvement needs in rice field work

Areas	Safety and health improvement needs
Materials handling	Slippery passageways Unsafe and unstable bridges over canals Heavy loads
Work posture and tools	Sustained forward bending posture Heavy hand tools Cutting injuries from knives
Machine safety	Uncovered machine belts Moving heavy agricultural machines
Work environment	Insect and worm bites Eye injuries caused by rice stalks Exposure to strong sunshine
Welfare facilities and work organization	Long and irregular working hours No adequate resting corners Unsafe drinking water and lack of hygienic toilets

Table 2-2. Postures in percentage of time spent for rice-harvesting work (Average of 7 farmers in 3 working days)

Postures	Day 1	Day 2	Day 3
Standing	13.5 %	12.1 %	12.6 %
Slight forward bending (Less than 30 degrees)	4.2 %	7.3 %	4.4 %
Medium forward bending (30 to 90 degrees)	52.4 %	51.7 %	58.5 %
Deep forward bending (More than 90 degrees)	4.3 %	7.4 %	4.7 %
Squatting	9.5 %	11.5 %	10.4 %
Walking	16.1 %	10.0 %	9.4 %
Total	100.0 %	100.0 %	100.0 %

Source: T. Kawakami et al.: "Workload of rice reapers in the Mekong Delta area in Viet Nam", in *Journal of Science of Labour* (1993), Vol. 69, Part II, pp. 21-29.

Farmers' fatigue during the work was associated with these improvement needs. As shown in Figure 2-2, symptoms of fatigue increased as the work proceeded. The symptoms related to physical workloads were particularly outstanding. Working in a state of fatigue increased accident risks and long-term chronic health risks. Low back fatigue in their everyday work could potentially cause chronic low back pain. The farmers who suffered low back pain could not work well and could lose their income. The farmers needed frequent short breaks and other practical measures to reduce their physical workloads.

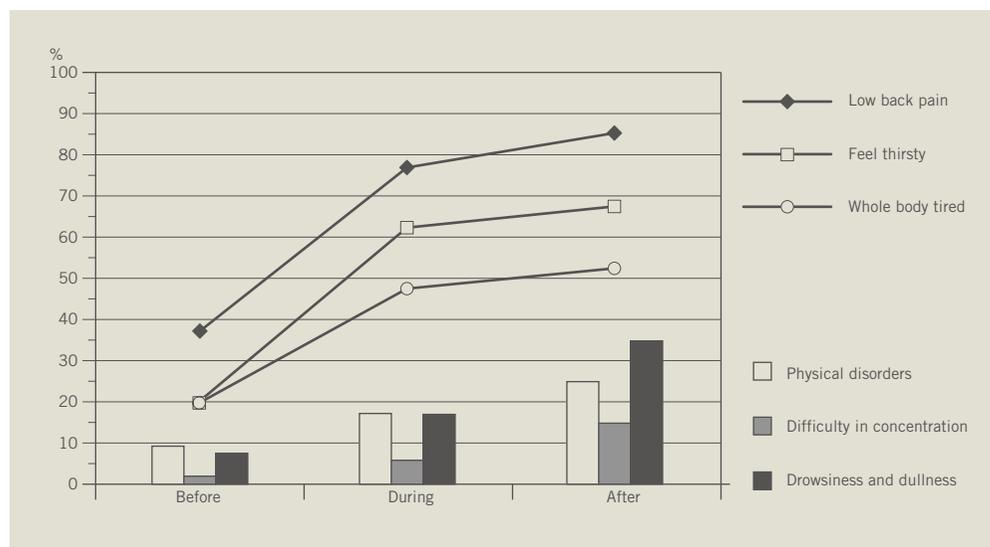


Figure 2-2. Changes in the rates of those who had corresponding fatigue complaints before, during, and after harvesting work (average of 21 farmers)

Source: T. Kawakami and T. Khai: "Sharing positive experiences in making changes in work and life in a local district in Viet Nam", in *Journal Human Ergology* (1997), Vol. 26, pp. 129-140.

Farmers and the study team exchanged their views on improvements in field conditions during these direct observation studies. Farmers actively talked about their work experiences and associated safety and health problems. The on-site discussions stimulated the study team since everybody could directly see the real work problems in front of them. These field study experiences were unforgettable to the team members and later became a rich source of information for developing the WIND action-checklist and clear-cut illustrations to show practical improvement measures.

The farmers invited the study team to their houses after work to see their living conditions. Farmers kept tools and machines at home and their working and living conditions were linked closely. Women needed to do household work such as cooking and cleaning after the hard work in the rice field. This experience produced the idea that both women and men should be trained together in safety, health and

working conditions. Promoting the equal participation of women and men became a key principle of the WIND training programme.

2-3-1. Seasonal changes of working times and workload and the difference in time use between men and women farmers

The study team asked five farmer families to record their working time for one year. This time-budget study (Figure 2-3) was to better understand the seasonal changes of the farmers' work hours and workload. The study also showed a clear difference in time use between male and female farmers. Female farmers worked longer due to the burden of family household work. Male farmers were more engaged in farm work activities often associated with heavy load carrying. These findings were reflected in the WIND programme development.

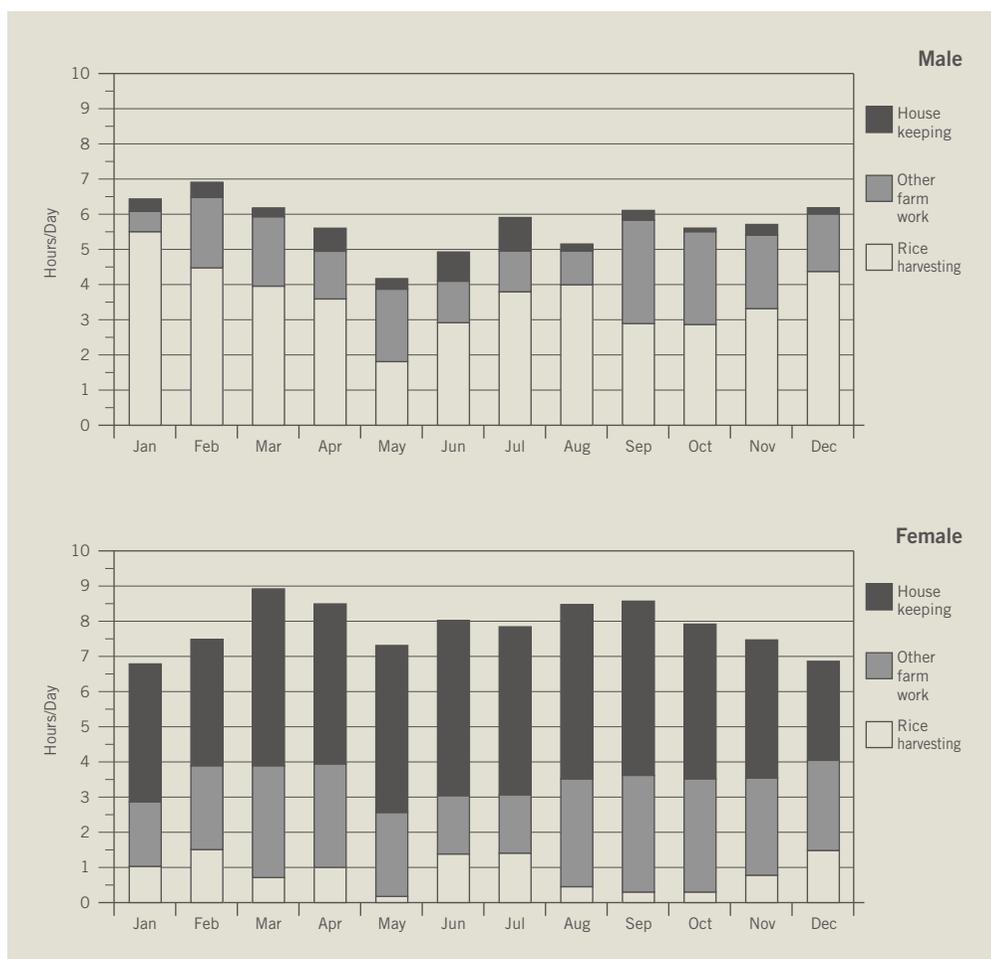


Figure 2-3. Monthly work-hour changes of the farmers studied (average of five households)
Source: T. Kawakami and T. Khai: "Sharing positive experiences in making changes in work and life in a local district in Viet Nam", in *Journal Human Ergology* (1997), Vol. 26, pp. 129-140.



2-2. Story of a local sugarcane factory

Sugarcane, as well as rice, is a major agricultural product in Vi Thanh district of the Mekong Delta area. Many small-scale sugarcane processing factories produced condensed sugar juice. The extracted juice was transferred to larger factories as raw material to make sugar. These factories employed farmers living nearby, including young and women farmers, and provided them with extra income opportunities.

2-2-1. Observing the working conditions at the sugarcane factory

In August 1994, the joint Viet Nam-Japan research team of the Vi Thanh Hospital School and the Institute for Science of Labour studied the working conditions in these sugarcane factories (Figure 2-4) by using the direct observation method



Figure 2-4. A typical local sugar-cane factory and the workplace

and monitoring symptoms of fatigue. They carefully observed the work of farmer sugarcane workers from the beginning of their work until the end in order to identify safety and health risks associated with their work. The study team actively discussed workable solutions with factory owners and their workers while observing their actual work in their workplaces.

Their working conditions were striking. Most of the farmer workers in the sugarcane factory worked continuously for 24 hours from one morning to the next (Figure 2-5). The lighting was insufficient for work at night. The workers, mostly young women, carried bundles of heavy sugar cane (around 50 kg) from a storage area to the crushing machine, extracted the sugarcane juice, and boiled the juice to produce sugar. The floors were slippery and there was an uncovered waste water canal.

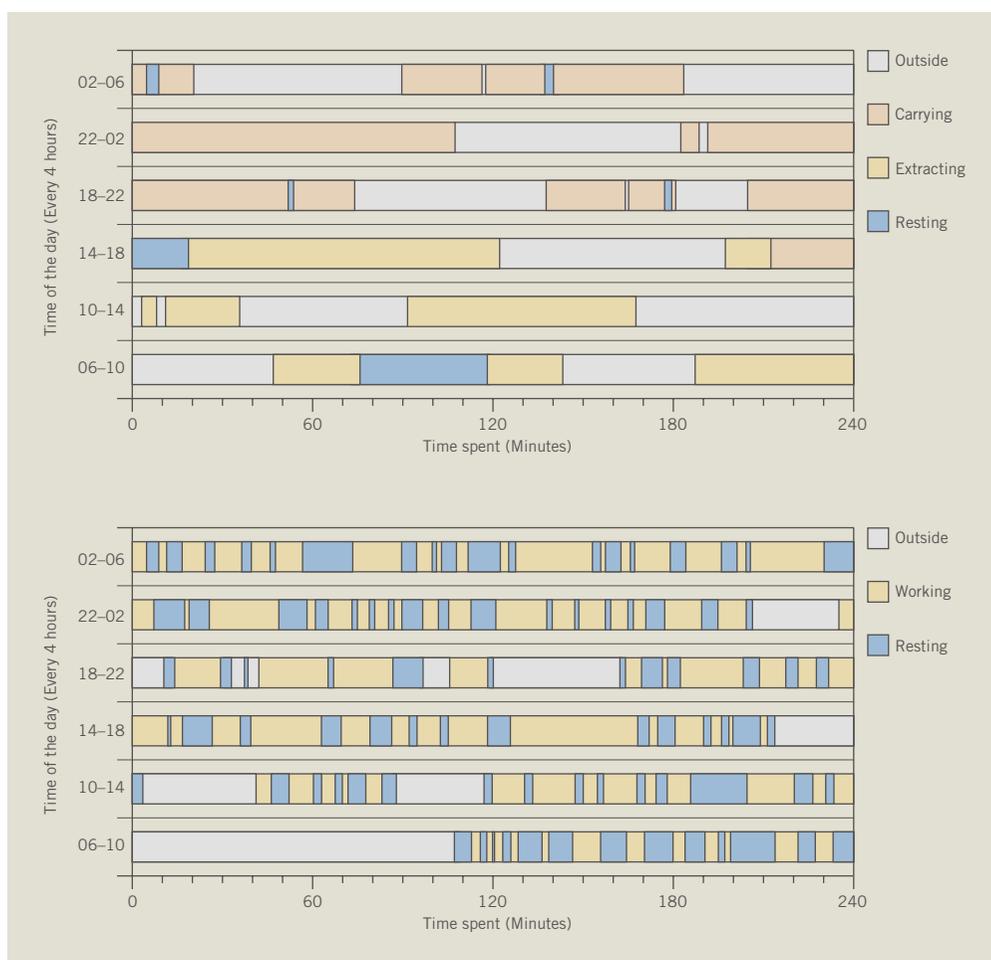


Figure 2-5. Twenty four-hour time-budgets of a sugarcane worker in the extracting section (above) and a worker in the boiling section (below).

Source: T. Khai et al.: "Improving safety and health of rural sugar-cane factories in the Mekong Delta area in Viet Nam", in *Journal of Science of Labour* (1999), Vol. 73, pp. 14-22.

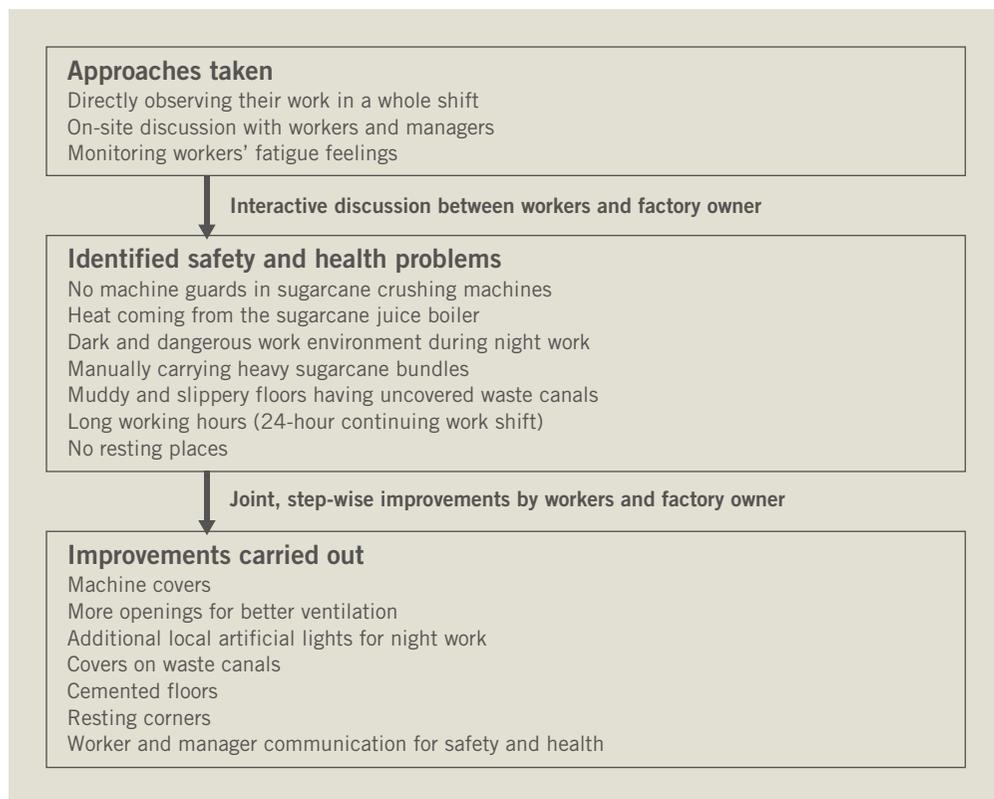


Figure 2-6. Steps taken to share practical experiences to improve safety and health in local sugarcane factories and to develop improvement proposals

Source: T. Khai et al.: "Improving safety and health of rural sugar-cane factories in the Mekong Delta area in Viet Nam", in *Journal of Science of Labour* (1999), Vol. 73, pp. 14-22.





2-2-2. Ideas for improvement

Figure 2-6 shows a summary of the initial direct observation study results and the on-site talks with these workers to develop ideas for improvement. It should be noted that both workers and the factory owner welcomed our observation study and were very positive towards making changes in their workplaces. They needed practical assistance and opportunities for the joint improvements.



Figure 2-7. Guard covering a dangerous rotating part of sugar cane crushing machine

One year later, the team revisited the sugarcane factory and was impressed with the positive changes. As summarized in Figure 2-6, several practical improvements including machine covers, more openings for better ventilation, additional local artificial light for night work, a cover on the waste canal, cemented floors, and resting corners had been made through their own initiatives (Figure 2-7, 2-8). We were pleased that our joint study had facilitated these improvements. Workers and managers in the sugarcane factories had jointly planned and implemented these safety and health improvements by using their own local, available resources.



Figure 2-8. Improved factory premises: before improvement (above) and after (below)

Later, a larger joint-venture sugarcane factory opened in Vi Thanh. This new factory was fully equipped with modern production machines that could manufacture sugarcane juice efficiently. Local small sugarcane factories could not compete with the large-scale factories and have been closed down.

However, the joint work experiences within the small sugarcane factories reconfirmed the strong self-help initiatives of local people in improving the quality of their working lives. The study team increased the confidence that a practical training programme would be able to further support and strengthen these people's own improvement initiatives. This became the principal concept of the WIND training programme, which began two years after the experiences in these local sugarcane factories.

2-3. Conclusions

The Vietnamese-Japanese joint study team observed the real working life of the local farmers and sugarcane processing workers and learned much by hearing from them directly. Fig 2-9 gives a summary of the steps taken by the team. The team stayed in the workplaces from the beginning to the end of the work in order to know the real job content and working conditions of local people, and assess work-related safety and health risks. This field study method promoted active on-site discussions between farmers, sugarcane owners and managers, workers and the study team members. These on-site discussions led them to practical solutions in safety, health and working conditions.

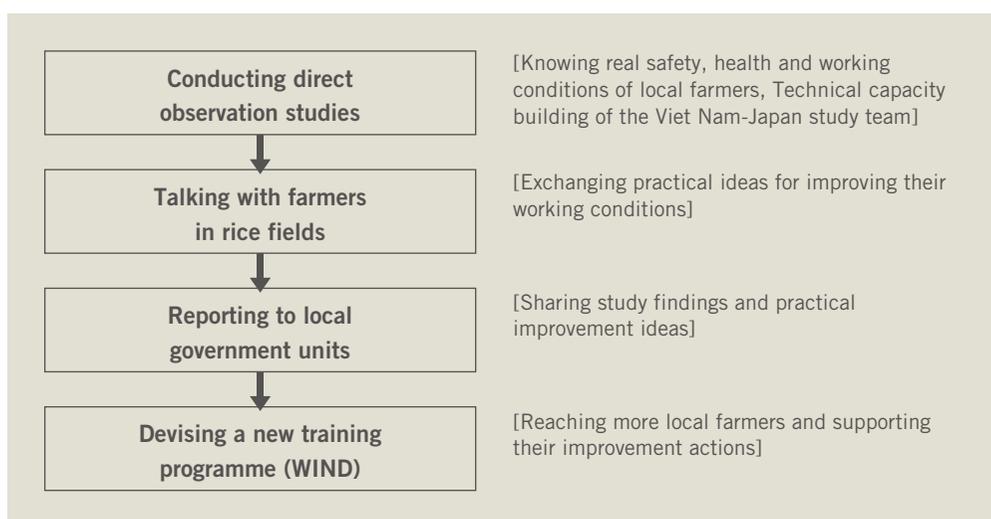


Figure 2-9. Learning from farmers' voices in rice fields through direct observation studies

The direct observation studies were not easy to conduct. The external researchers had to be exposed to the same working environments as local workers and farmers, such as exposure to strong sunshine, snake bites, or night work without sleep. This field work experience was a real opportunity for the team to understand the heavy workload and safety and health risks of the farmers and workers. The farmers and workers welcomed the commitment of the team and both nurtured their friendships for future joint actions.

These field experiences became the corner stone for the birth of the WIND programme. We learned much from the self-initiative of local people towards better working conditions and could share their support needs. This led to the adoption of participatory approaches of the WIND programme as the core methodology. The findings from the direct observation studies provided a number of ideas from which to select practical action-checklist items and develop good example illustrations.